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ON A UNIVERSITY EDUCATION.

By Emeritus Professor Francis Anderson, M.A., LL.D.

An old Scotsman, asked for the secret of his success in life, replied : " Well, not having had a University education, I just had to use my brains ". I once assisted at a game of poker, in the smoking room of an ocean liner. My assistance could not have been of much value, for at the close of the sitting, one of the players said to me : " Why don't you have a Professorship of Poker at the University ? That's the thing to bring out what's in a fellow." I forbear from saying anything about the methods by which these two gentlemen had won success in life, but they both happened to describe the characteristic and the test of a good University education. It should train a man to use his brains, and it should bring out the best that is in him. The question is mainly one of men and methods. The best teacher is one who can bring out the best in his pupils, and he cannot do so unless at the same time he brings out the best in himself. Many teachers are admirable instructors and trainers. Some are skilled in co-ordinating facts, and preparing the peptonized pabulum of instruction for weak mental digestions. I thank my good fortune that in my early life I came under the influence of a few men who had the electric touch of personality. Facts may be forgotten—almost as soon as learned. The mere knowledge of facts may not develop the faculty of finding out facts for oneself, or, what is still more important, the ability to recognize the significant facts. Much may fade from memory. What matters is the method and the spirit, and a spirit imparted, as Robert Louis Stevenson said, is a perpetual possession.

The age-long controversy continues as to which are the best subjects of education. The real subject of education is the pupil. Subjects of instruction may be valued according as they fulfil the twofold end of education—training a man to use his brains, and bringing out the best that is in him. Poker playing may do the one ; does it do the other ? Playing bridge morning and afternoon and evening may " smarten up " a dull young woman's wits ; what else does it do to her ? And how, in both cases, are the wits used afterwards ? In the hands of a good teacher, the Latin Grammar may become an instrument of righteousness, and the study of Algebra do more than develop that " low cunning ", which, it has been said, is necessary for the successful pursuit of Mathematics. When I think of the interminable and unprofitable discussion of the relative values of subjects of instruction, I " take refuge in Allah ", and recall John Milton's definition of Education, as " that which fits a man to discharge justly, skilfully and magnanimously, all the offices, private and public, of peace and war ".

Milton speaks of the " man ". In all education we have to think of the man who has to be fitted for life, as well as of the man who has to be " turned out " competent and efficient in his specialized occupation or profession. Has he learned how to live as well as to make a living, how to be, as well as how to be an engineer ? The mind of the student may have become as absorbent as a sheet of blotting paper, and as little discriminating. He joins the company of persistent plodders, sometimes of " decent duffers ", who succeed within the limits of their capacity, in virtue of a certain amount of honest hard work. What has his education done for him in other respects? What does he do with his leisure ? What books does he read ? What is his favourite daily or weekly paper ? What kind of joke does he laugh at most ? What is his definition, if any, of Religion or Politics ? Or, let us suppose that through his specialized training in one of the ten faculties within which the University of Sydney now receives candidates for the " higher education ", he has become a super-efficient master of the dexterities of hand or brain, which in time win for him money, place or power, or all of these, becoming an object of admiration and envy, perhaps of respect and honour among his fellow citizens. When tested in time of trouble, all of these, the decent duffer, the persistent plodder, the superman, may rise worthily, even nobly to the occasion. They helped to win the war, and may be trusted to help the nation to win its way out of the present distress. For that, let us have faith in human nature, especially Australian human nature, but do not us let us boast of our educational system, so long as our standards of public and private morality are what they are, when lying and dishonesty are regarded as venial offences which after all do not matter much, and to be found out in our sins is only " rotten luck ". The factory type of efficiency, with its mass production and standardization of methods and results, is bound, when applied to education, to be destructive of the very spirit of education, which, as Richter described it, is " nothing less than an endeavour to liberate, by means of a free man, the ideal human being which lies concealed in every child ".

But let us be "practical"! Whenever the word "ideal" is mentioned, the practical man who works by rule of thumb, the seasoned official who has "heard all that before", the sagacious politican with one eye on the man in the street, and the other eye God knows where, all say: "Now let us be practical." They keep on saying so till things get into a mess (not, of course, that they get things into a mess; things always "get themselves" into a mess) and then they go about asking: "Is this all we get from the millions we spend on Education? What have our leaders been about?" During the recent Inter-University Conference in Sydney, one of the questions submitted for future discussion was: "Whether our present troubles in Australia are not fundamentally due to imperfect development in the intellect and character of our citizens, and, if so, whether the Universities are doing their utmost to remedy these defects?" One of the members of the Conference declared that "University graduates were no better than others with less educational advantages". The Australian citizen naturally resents any attack on his "intelligence and character". His best defence, however, is to show to a waiting world how in Milton's words, he can discharge "justly, skilfully and magnanimously" his public and private offices as an honest man and a patriotic citizen. Meanwhile, all honour to the brave and upright men in every party, who will not stoop to feed the public with flattery and fool it with lies. But let us return to the question of the work of the University in helping to develop the intelligence and character of the future citizen. What can it do, beyond giving him instruction in the use of his tools, by whatever name they may be called, to educate the "man", to put him in possession of his spiritual heritage, to carry on that process of "liberation" which begins in the family and the school?

Earl Beauchamp, in his interesting and thoughtful address in the Great Hall of our University, spoke of the way in which that Miracle of Strength and Beauty which we call The Bridge, dominates the city from almost every point of view. "The Bridge is at the end of every street." Then going on to speak of the University in relation to the community, he made of The Bridge a parable—"The University should be at the end of every street"—leaving it to his audience to develop his thought. The modern University is not the home of a small cloistered community, "a beautiful scene of slumber and thoughtless meditation", as Junius described the Cambridge of his day. Its life and work is in vital relation to the life and work of the nation, and all the great national interests should be represented there, not merely the interests of the "learned professions", or the "Four Faculties". There are now

Ten Faculties in the University, and in the future there may be more. The old distinction between trades and professions is becoming obsolete. New professions spring into existence to meet the growing needs of civilized life. Wherever a practice implies a sufficiently complex body of theoretical knowledge, not merely a number of " knacks ", there is the possibility of a profession, claiming recognition in the modern University. At the same time the modern University, as it grows in magnitude and complexity, has to face a great danger. In the conglomeration of its schools and the multiplicity of its interests, its organic unity may disappear. It may become an amorphous mass without a true organic centre, many bodies but no soul. Eucken, before his death, warned the German University of the " unmistakable danger " which threatened it—the " danger that the University may divide itself too much into separate faculties, and that this would mean that our people would not sufficiently get from the University the intellectual leaders who are indispensable to them ". Of course, this opinion was " made in Germany ". It may, however, be not without significance for the modern democracy, especially that type of society where the uneducated select the incompetent to control their destinies.

In the great modern University, each Faculty, each Department, may be trusted to look after its own interests, to train its own men. The University itself may thus be many-sided, while the men it turns out may be very one-sided. They may possess trained minds, but also starved souls. If we can trust American authorities, the danger which threatened Germany is actual in the United States. " To the average intelligent American, education means skill, information—at most accomplishment. It does not mean to them an inner change—the putting on of a new man, a new criterion of truth, new tastes and other values." The University, according to one of the foremost leaders of educational thought in America, should be the freest spot on earth. The factory type of efficiency has no place there. The evils of the industrial system, with its mechanization of life, its quantity production, and its rampant commercialism, have, according to the late G. Stanley Hall, infected the American Colleges and Universities. " Knowledge has been broken up into standardized units of hours, weeks, terms, credits, blocking every short cut for superior minds." The University and College Deans form a "bureaucracy which represses personal initiative and legitimate ambition." Are we to regard this description as a mirror in which we can trace, perhaps somewhat magnified and distorted certain features of our own Australian Universities? It is pleasant to be able to quote the considered opinion of another American authority. The late Woodrow Wilson said, speaking at Princeton University: "I believe general training with no particular object in view, to be the very heart and essence of University training."

The great problem which faces our Australian Universities is, how to secure specialized efficiency without sacrificing the advantages of a general training. Professor Wilson, speaking during his late visit at a Dinner at the University Club, described the ever-increasing specialization of knowledge as reflected in English University life and training. The old compulsory general training in Arts, in the circle of the "Humanities", had gone, and nothing had taken its place. Students had even begun to specialize before leaving school, and came to the University prepared to devote themselves during their whole course of study to one subject, or even a part of one subject, like Medieval French. What was to supply the place of the liberal education of their fathers? He came to the somewhat depressing conclusion that in the crowding of the curriculum with a multitude of subjects, and the intensive study required in the professional and technical schools, nothing could be done. The interests of general culture would have to be left more and more (this seemed the only hope) to the spontaneous activities of the students themselves in their clubs, societies and manifold organizations. Through these the free play of ideas would be stimulated, and interest awakened in the things that matter for other than examination and professional purposes. Through the students themselves the ideas and ideals which move men in the wider world would enter the University courts, and thus the soul of the University would be kept alive.

We have already much of this in Sydney University, and we may hope for more. But besides art, music, the drama and sport, there are other values of life on which we older men from British Universities were expected to think long and steadily during our undergraduate days. These values were not only discussed among ourselves, in private and public, but were in the air we breathed, presented to us by our teachers and by great thinkers and orators who visited us from time to time. We were surrounded by the monuments of an historic past, and continually reminded of our goodly heritage. We gradually became conscious, in the midst of the engaging frivolities of undergraduate life, of the deeper meaning of patriotism, the sense of responsibility for a treasure inherited and a trust transmitted from generation to generation. On Sundays we met together in Chapel, and were reminded that we were members one of another, sharing a corporate spiritual life, and linked to the whole universe of created being. We came under the sway of forces immeasurable by human analysis and certain of ultimate victory. There is an uncanonical saying of Jesus—"He that is near me is near the fire." Once or twice only in the Great Hall of our University have I felt that I was "near the fire"—when we gathered together in the unity of the spirit at the religious service on Armistice Day. We have suffered so much from the kind of religion which divides men, that we are afraid to give a chance to the religion which unites men, and which need never become a matter of controversy at all. Are such influences to be shut out wholly from our Australian University life? Is all that over which we older men (and all the men we knew who were worth anything) pondered so long, to be lost to the young men and women of our Australian Universities, simply because there are no pigeon-holes in our curriculum in which these "subjects" can be inserted, and no one Professor more than another, who need be troubled in mind and conscience about their importance in the life of the University and the Nation?

Our students at the University have their exits and their entrances. Each year they flock to us from the homes and schools they represent, bringing with them their varying standards of manners and morals, and varying greatly in mentality. Many of them might be employed more usefully, and perhaps more happily, elsewhere. But one cannot foresee the future, and some of them are plants, as Dr. Johnson said of Goldsmith, that flower late. We revise from time to time the conditions of entrance, a constant source of worry. Perhaps we should worry ourselves more over the "exits". Every year we turn out a certain number of "finished products". We let loose upon the world a number of young men and women, more or less equipped for the life struggle. With what else are they equipped, with what ideals beyond the common hopes and fears for the future, which thrill every human heart? What is their scale of values with regard to the fundamental things of good and bad report among men? If our young men have no vision, the people will have no vision, and without vision the people perish.

ANNOUNCEMENT.

The Editor has pleasure in announcing that Emeritus Professor Francis Anderson has agreed to contribute to the Journal, during 1931, four articles under the caption, "Sidelights". The first of these articles, to appear in the March issue, will be on "Sidelights in General". The articles will deal in the main with topics of ethical and religious interest. It is felt that this series of contributions will be warmly welcomed, especially by Emeritus Professor Anderson's former students.

INDIVIDUALITY AND COMMUNITY.[1]

By W. ANDERSON, M.A.,
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"Everyone that talks about Heaven 'aint going there."

I.

"INDIVIDUALITY" today is a word with which to conjure. It is the great stand-by of social and educational rhetoricians. From some of them we learn that individuality, this most precious of human attributes, is being repressed by this or the other traditional practice, or that its rights are being threatened by some current tendency in public policy or economic development. By others it is celebrated as the great discovery, reserved for our own day and generation, on the basis of which sweeping changes can and ought to be made in every field of communal activity. In our own corner of the field of learning, we readily notice attempts to put the principle of individuality at the centre of our interpretations of human life and experience. Such efforts are believed to be leading our speculations into the most profitable path at the present time, and to promise final relief from the barren agitation of many insoluble or unintelligible problems. In the field of psychology alone it is held that in the concept of the individual we have at last the basis for a coherent presentation of the subject as a whole, as well as for solidly progressive investigations.

So far indeed as psychology is concerned there can be no manner of doubt about the chaos that is found to exist where any general basis of exposition is sought for the science. This state of affairs is clearly reflected in one of the most recent, and surely the most desperate, of definitions to be offered: Psychology is that which is studied by psychologists! In the circumstances we can even view with charity the paragraph in a recent issue of a fashionable periodical in which its readers are informed that "Psychologists tell us that the bones of women are becoming larger". Such a situation affords a strong incentive to our adopting, as a means of escape from existing perplexities, the proposal to define the subject simply as the study of the individual as such, no matter whether the attitude be "positive" or "normative". Thus what is even now reckoned one of the branches—some persons with a curious sense of order, say, one of the " applications "—of psychology, namely, the so-called " individual " or "differential" psychology, will be elevated to the status of the principal discipline itself. " Individual or differential ", we notice, for here already we find the complete acceptance of that equation of individuality with difference which is so characteristic of the outlook of the new individualists.

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[1] Presidential Address delivered before the Eighth Annual Congress of the Australasian Association of Psychology and Philosophy at Wellington, New Zealand, on Monday, May 12, 1930. This paper may be read as the promised sequel to the same author's article "Self" in *The Australasian Journal of Psychology and Philosophy*, Vol. VI, No. 1, June, 1928.

Returning to the consideration of the wider movement of thought and opinion to which I referred at the outset, let us glance at a few specimens of the way in which it finds expression. We are all familiar with the statement that we are living today in the " machine age " of " standardization ", in which uniformity is imposed on human beings at the expense of their individuality. The educational criticisms and projects of the day are full of references to the neglected importance of individuality in traditional scholastic methods, the basis of the charge being sometimes that these methods are what they are, sometimes that they are traditional at all, and sometimes an incoherent mixture of the two. The Canterbury Chamber of Commerce[1] informs us, in characteristic style, that our higher schools in New Zealand are " turning out a low-quality product by mass-production methods ". " Much of the weakness " that is alleged results, we are told, " from concentration upon the achievement of stereotyped qualifications by those responsible for the training, rather than upon the nature and extent of the training best fitted for the trainee ". And again, " It should be recognized that, since capacities, aptitudes and temperaments differ so widely, it is eminently unsuitable to put all pupils through the same educational mill." From another quarter we learn of the existence of ambitions to develop in this country an educational system which will " bring out the individual qualities of each boy and girl, and not treat them so that all are levelled to uniformity, as has been the case in the old academic system ". We are not unacquainted with the educational Messiah who from the Mount of Office admonishes us : " Ye have heard that it was said by them of old time that the primary school studies the individual pupil, the secondary school the subjects of instruction, but I say unto you that for the future every branch of education from the kindergarten to the university shall make the study of the individual its first consideration." From still other sources we learn that the existence of a common curriculum in schools has been maintained in complete disregard of possible " individual differences " of mentality, that " scientific psychology " has now established this possibility as a " fact ", that this fact it is which explains all the phenomena of " retardation ", but that this and other like evils can now be remedied by diversifying the curriculum to suit the differences of " aptitude " diagnosed by methods now securely established by psychological " science ". In yet another connection we hear vociferous complaints that the entrance examination system of the University of New Zealand imposes such a uniformity upon the teaching methods of the secondary schools as is bound, by destroying their " individuality ", to minimize their social efficiency. So in the world of industrial production we hear much of the need for a " scientific " allotment of workers to tasks or of tasks to workers, on a new basis of " individual " differences of " temperament " and so forth, and this " industrial psychology " professes itself able to do with the greatest accuracy, promising therein a sure cure for Industrial Unrest. In view of the present economic situation we do not hear quite so much of industrial psychology as we did a short time back, but no doubt its exponents will be early to the fore with projects of vocational selection—for relief works!

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[1] Canterbury Chamber of Commerce Bulletin : " Education in relation to Industry and Commerce ". Prepared by the Department of Economics of Canterbury College.

This general trend of ideas, not confined, as we have seen, to any single branch of human activity, is a development of which philosophy is bound to take account. It raises distinctively philosophical problems. If philosophers will not deal with them, they may rest assured that the other parties concerned will be only too glad to shelve them, to the ultimate detriment of the community. Now the business of the philosopher in face of any current controversy or movement of thought is to extract the general ideas therein involved in order, in the fullest possible context, to examine into their ultimate intelligibility. Do they after all make sense? Or is there some confusion of thought on the essentials of the problem? The procedure of the philosopher is, moreover, just that which is eminently in place regarding the practical side of the issue, especially where the problem is one concerning the application of the experimental results of those specialized investigations to which the name " scientific " is frequently restricted—a situation which, as Bosanquet somewhere points out, is one of the most fruitful sources of fallacy in the entire range of the human intellect. Lack of detailed information is, of course, a constant burden upon the success of human contrivance. But, unfortunately, the methods by which it can be overcome, so far as it can, are not adequate to undo the harm that is done in the world by people simply not knowing what they are talking about. Here philosophic methods alone will serve. Science attacks ignorance; philosophy attacks stupidity.

We may take as an illustration of the philosophic interest the matter of the scientific handling of a question which forms one of the branches of our present topic. The "problem" of whether or not "mental qualities" are inherited is notoriously a matter of controversy in the circles denominated *par excellence* scientific. At one time the empirical evidence appears to favour one answer, at another, the opposite answer. The philosopher, however, without losing sight of the empirical evidence, has, characteristically, to move the previous question. It is for him to inquire if the idea of mental qualities is itself intelligible. Is mind a substance that can be explained in terms of structural properties or "attributes"? Or, to put the matter otherwise, is a human being a "thing" with mental, as well as other, qualities that can be described, differentially measured, and summed up? Or, on the other hand, is the whole conception of qualities, as Hegel suggested,[1] one that inevitably fails to conform to the nature of mental life as we partake therein? May not the "mental traits" of which contemporary psychologists speak with such an affectation of familiarity, have eventually to be relegated to the same class as round squares, biased education and harmless cranks?

Now I believe that such a confusion of thought will be found running through the mass of contemporary diagnoses and projects of which we have provisionally taken stock. There is reason to apprehend that this deficiency in fundamental thinking, however it may be buttressed up by the currently fashionable adulation of "research", will lead in practice to profound disappointment for those actively concerned in these movements, to reaction in place of progress, to the squandering of public resources, and in particular to the subversion of the very thing whose interests it is sought to promote, the rights of individuality. In saying this I would point out that it is not merely, nor even mainly, among those who deal with these matters at second hand that the misconception flourishes. Responsibility is not to be evaded by *de superiori* language about the inadequate understandings of those convenient scapegoats, the despised politican or our poor old friend "the man in the street". The roots of the trouble go as deep into the procedure of the professional exponents of what is now styled social and educational science itself. It is closely related to the latter-day gospel that the simpler or cruder our intellectual concepts the better, if only we can devise a sufficient mathematical technique to extend their application over the widest possible range of experience, and bring into line those departments which have hitherto seemed to require for their handling concepts of a more complex order. This procedure, indeed, is peculiarly seductive in the case of human personality, because of the tendency of the assumption that its nature has been so simplified to produce just that result in fact. What a man is going to be, in short, depends on what he thinks, or is led to think, he is.

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[1] "Logic',, Wallace's translation, p. 171.

The current ideas of the nature of individuality reveal such a process of intellectual levelling-down. At the same time we find that they make a certain popular appeal which is not derived from the attitude of natural science. The very name of individuality, like justice or liberty, or equality, has about it a fringe of romantic suggestion. It speaks of liberation and enjoyment; it denotes something that cannot be confined or defined by abstract rules and regulations. Only, as Shakespeare reminds us, the Devil can quote scripture for his purpose. The "scientists" in these matters would steal the thunder of educational liberalism. They brandish the traditional values associated with individuality to recommend something that negates these values altogether.

What then is the source of this confusion? To answer this question we must consider individuality in its most general sense as a category of thought. For this purpose it must be viewed in relation to two other philosophical concepts, those of the universal and the particular. The close mutual implication of these three concepts, together with the need there is to distinguish clearly their respective functions in human thought and experience, is in modern times nowhere more clearly recognized and systematically developed than in the philosophy of Hegel.

A thing is thought of as a particular in so far as it is a single case of a certain type, an illustration of a general law, "value" of a variable in an equation. In it certain qualities, which are universal in that they may be repeated in any number of other instances, are present, each in some definite degree, or together combined in some specific proportion. The thing is thought of as an individual, on the other hand, in respect of the way in which its "qualities" serve, that is to say, its potentialities are exercised, in the maintenance of its identical reality. The particularity of things, then, we have to regard as a datum, whereas their individuality is not a datum but an achievement, a fact of function or activity rather than, like particularity, a fact of structure.

Stated in the technical language of philosophy, then, the fallacy which I find in the current "sociological" and pedagogical language about individuality is the illegitimate identification of the individual with the particular. It is this which accounts for the way in which difference has come to be substituted for intensity and comprehensieveness of participation in the common, or, in a word, for reason, as our governing idea of human individuality. No doubt the identification in question is one which it is easy to make when both the particular and the individual are contrasted with the universal. Nevertheless, it does not require much reflection to elicit the fact that our attitude to things as particulars is by no means the same as that we assume towards them as individual. We regularly sacrifice the individuality of things to their particularity in practical life. Armed with our universals, our knowledge of the general laws which connect the properties of things, we utilize the specific amounts and proportions of these powers we find in them in the promotion of ends which often involve the destruction of the individuality of the things in question. But their particularity is not similarly destroyed. When we burn a piece of coal on the fire its individuality is lost, but its particularity remains. That "particular" lot of matter, or of energy, or of something, is permanent and forever different from all others. But the very word "particular" emphasizes that in this respect the thing is merely a part of a whole, to whose purpose it is indifferent. The particular, as Hegel would put it, exists for another, in itself but not for itself.

The human aspect of this situation is well brought out in part in an illustration given by Professor G. P. Adams :[1]

> "Let anyone view his world solely in the light of the categories of behaviour and control, then everything specific and individual is envisaged as one instance of a type, a law. An illustration will bring the matter before us at once. I find myself in a strange city, and in order to reach my destination I make inquiries of a uniformed individual whom I see standing on the street corner. It is an individual policeman whom I address, but I have an eye to nothing save his uniform, which I take to be the sign of a class of men likely to have authoritative information about that which I need to know. I use my policeman in order effectively to adapt my behaviour to my environment, in order to solve a practical problem. He is to me no individual object ; he, or rather his uniform, is but a stimulus. On the other hand, in order that I may discover something individual about the policeman I must cease to regard him simply as an instrument. My interest and attention must terminate in him as an end, and not pass through him as a means. I must seek to understand him, share his ideas and feelings, sympathize with him."

What we have to add to this is that the purely utilitarian attitude, while it is just that which fails to disclose individuality, does, on the other hand, emphasize particularity and concentrates its attention on difference, the structural element. Indeed, the strongest evidence that the contemporary propaganda of individuality confuses the individual with the particular, is just the prevalence of the phrase "individual differences". So long as we accept this equation of individuality and difference we remain at the mechanistic, externally manipulative point of view.

Failure to see this accounts for the odour of sentimentalism, and even hypocrisy, which is apt to linger about the current diatribes against social standardization and educational mass-production. For example, out of one hundred presons who would cheerfully assent to the proposition that children are not to be treated, or cannot be treated, as lumps of putty to be moulded to a pattern, ninety-nine would probably give or accept as the reason that each child has a distinct individuality of its own, requiring development in a unique direction, and allotment to a peculiar niche in the " social environment ". Only the odd hundredth man would reply that the objection lies in the fact that as a rational being the individual demands participation in the appreciation of a common order of objective significance. If, then, there is a faint trace of sentimentalism, though assuredly none of hypocrisy, about Professor Adams' account of the situation, it is because he appears to assign the neglect of individuality to the emphasis on similarity in the form of the type or the law, suggesting that the rational, sympathetic apprehension of the individual is somehow a function of the mere process of discrimination within the type. That, on the contrary, is precisely the purpose of the law or type itself. With the pronouncements of some other authorities, however, the line is harder to draw. What are we to make of the sentimental industrial psychologist who tells us that of course he could present us with a complete scheme for adapting human beings to industry, but finds this problem overshadowed by that of adapting industry to human beings? What shall we say of the sentimental educationist whose soul is revolted by the idea of imposing any uniform stamp upon the youth of the nation, but is prepared rigidly to delimit the scope of a child's future life by the use of an infallible system, somehow revealed to the primary school mind, for the discovery of differentiated aptitudes for positions in the economic order, or in higher education institutions, to whose modes of operation the selectors are themselves strangers? Scratch a sentimentalist and you find a mechanist.

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[1] "Idealism and the Modern Age", p. 192.

Difference, then, is the hall-mark of the particular. The recognition of difference in quality, or in quantity (which is only a mode of quality), is essentially a basis of manipulation. Our interest in the differences of things is an interest in what we can do with them. There is here no suggestion of our participating in anything in common with these subjects (or rather substances). Our recognition of any common nature, of which various particulars are the diverse exemplars, has no such implication. Its sole purpose and value lies in the way in which it helps us to discriminate between the particulars. This is what the pragmatist implies when he says that thought (that which deals in identities) is subservient to practice (our dealings in diversity), but not conversely. And, indeed, if there were no possible third term beyond the universal and the particular, there is some likelihood that we ought all to be pragmatists.

As it is thus of the essence of particulars to be different from each other, so we find that those whose thinking is confined within the categories of the universal and the particular commonly reach the conclusion that our ascription of even relative identity to things merely marks a limit *de facto* to our knowledge. That we find two things the same means, it is believed, that so far we have not elicited their real differences. Identity on this view is a purely negative conception. But then we must remember that this result has only been reached because we started by considering the things purely as particulars, as substances, or subjects of structural qualities, as which they could only be recognizable by their differences.

This is true in what is only the special case of inequality, the difference in the degree of some quality or nature as inherent in numerically different substances. If human individuality is once put upon the structuralist basis of particularity or idiosyncrasy, it cannot be otherwise than that inequalities should be found to prevail and equality be invisible. This should be kept steadily in view as we listen to our new psychologists and sociologists loudly proclaiming their late discovery of a positive and final solution of the age-long dispute waged by our benighted ancestors on the point of human equality or inequality. The latter, we are told, has now been established as a fact. The former can henceforth only be regarded as at best a more or less impracticable project or ideal. But why should we follow these new prophets in mistaking a tautology for a discovery? If we will only deal with the subject under other and more adequate categories of thought, we shall find that equality is just as "hard" a fact as inequality is claimed to be, and as widely prevalent in the world. Namely, there is as much equality in the world as there is community; as many equalities as there are communities. Moreover, the standpoint from which equality is disclosed is logically prior in human experience to that which discloses inequality.

With these considerations we are introduced directly to the subject of Community in its relation to Individuality. The community of individuals is something which cannot be expressed by any manipulation of the category of substance and attribute. We cannot reduce the way in which men have an object, or objective, in common to any quality or property distributed among them as particular "specimens of humanity". The two notions are incommensurable. To represent community we must think in terms of the category of subject and object, or, in other words, envisage the situation in terms of mental life and experience. But it is precisely from this point of view that we approach a conception of individuality which supplements and forms the necessary setting for both universality and particularity, and is no more to be reduced to the latter than to the former. Moreover, the individuality which we now envisage, so far from being opposed to community, or subsisting in inverse ratio to community, or being related to community in any accidental way, is in truth its strict correlate.

Conversely, we have to observe that the structural, differential view of individuality is just that which discourages and indeed in the end precludes us from thinking in the characteristically mental terms, those of reason, will and knowledge, of the relation of the individual to the world. All effort comes to be regarded as pathological, a mere symptom of maladjustment. No allowance is made for any responsibility upon the individual to make a place for himself in the world, or to adapt himself to it or to any of its institutions in the light of his ideals, or in any way to try to make the best of things. The particular specimen of humanity is simply fortunate if by virtue of his idiosyncrasy he can fit into some niche in the natural or social structure, and doubly fortunate if he is actually in it. Where does anything specifically mental enter into this scheme?[1] What difference can it make to the key to know that it fits the lock, or to try to fit the lock? Even if knowledge be granted a certain positive value in preventing such efforts where they are useless, is not that knowledge better in the possession of the key's owner than of the key?

There are, of course, such things as master-keys. Provision is frequently made on the structuralist view for a mental constituent in the form of an organic quality or "character" of variability, adaptability, or adventurousness. But the bias of the whole position soon leads to absurdities. Let us consider for a moment this innate "adventurousness" of which we hear so much. Adventure is appropriately conceived to consist in being different from others, and hence the quality consists in a specific structural tendency to be different as such. One of the favourite examples chosen to exhibit this quality of adventurousness is human migration. Professor McDougall, for instance, believes that the fact that a "group" has migrated from a parent community is proof of the inborn mental superiority of its members. But if we are to deal with the subject in these terms of "being different" and "qualities", we get the curious result that it is only so long as the quality is found in a minority of cases that it is entitled to its name. If it occurs too often, its bearers cease to be the adventurers; it is the remainder who are most obviously "different", and thus must be credited with the possession of the inherent specific tendency in question. As regards migration, it may even come to be adjudged the adventurous course to stay at home. There is much point in Mr. Stanley Baldwin's mild rebuke to the American Pilgrims' Club: "Do not despise the descendants of those who remained behind to grapple with the problems from which your ancestors fled." One could say a great deal about the attempt to explain human migrations by postulating a racial trait of "adventurousness". It seems clear that much emigration and colonization in historical times has been due to the desire to cling to certain settled habits of living that were threatened with disturbance.

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[1] A typical expression of this point of view is to be found in a curious work entitled "Mind, Its Origin and Goal", by G. B. Cutten, published by the Yale University Press. It deals with the whole question suggested by the second term of the sub-title, the "Goal", from the eugenic point of view entirely, and considers it to consist in the problem of the precise allotment of the requisite units of mental ability to the various strategic points in the social organization. Not a word is said about the nature and merits of the different or conflicting policies that these minds would have to consider. So far as concerns the kind of thing that mind does, the author might as well have been talking about coal, wheat, or whisky.

With the collapse of the structuralist versions of or substitutes for mind, we are driven to reject the attempt to envisage a relation of "minds" to their activities in terms of the relation of substance to attribute, potential to actual, structure to function. We find ourselves in the same position as did Aristotle. After exhausting the possibilities of a biological interpretation of mind in terms of structure and function, he had to confess that when we come to deal with "active intellect", that is to say, actual intelligence or conscious experience, we have here a "function" which is not that of any antecedent or merely permanent structure, but proceeds of itself and makes its own structure. The true "mental structures" are the objects and institutions of experience, which, as thought and in thought, have an infinity or ideality that does not belong to particular substances. Conscious experience, then, as the essence of mind, has the characteristics, firstly, of being an activity which requires and suffers nothing that is not of the nature of activity to account for it, and, secondly, of being determinable only in respect of specific relations of subject to object in knowledge. We are what we know.

Nor are these two features of mind merely additional the one to the other, but are expressions of the same fact. The mental or cognitive fact of objective reference is just that which demands explanation in terms of activity, and forever falls short of explanation in terms of quality or potentiality. Conversely, the only unmitigated activity is mental activity. But now this objective reference is at the same time the unique basis of community. No accounts of "society" can avail which do not imply as their central concept the reference of many subjects to a common object, and indeed a common good. While on the other hand once we have this conception of a common object or good, we have the sufficient basis from which to construe coherently and exhaustively all the specific features of particular historical communities.

Those on the contrary who try to occupy the position that all explanation terminates in structural elements are condemned to half-heartedness in their expositions. They are always compromising with considerations drawn from the world of activity, however the latter may be discounted "in the last analysis" (to use a favourite phrase of theirs) by the use of terms like "epiphenomena". In this way the existence of conscious experience and of community are apt alike to be admitted in the form of isolated facts, and to have wild-goose chases made after their instrumental function in the plan of Evolution, or what not. Versions of consciousness and of community are even incorporated in one way or another with the structural conception of individuality.

Commencing with the case of consciousness, we find that its admission is required if the doctrine is to have that popular appeal so necessary to the success of its promoters' schemes of human adjustment. We have propaganda, and even imperatives in the ethical manner. Take the current religion of "self culture" in its manifold forms. The old maxim "Be a person" is now understood in the sense of "Be different!" "Have the courage to make a curiosity of yourself!" "Don't repress your idiosyncrasy!" The probable consequences of this movement are, of course, a matter for alarm in quarters where there is much concern for the stability of the communal institutions. But those who are so concerned usually fail to rise above the intellectual categories of their opponents. In the realm of substances and attributes the only possible meaning of community is mere similarity. Hence the only possible outcome to the dispute is of the nature of an irrational compromise. We shall be best served, it seems, by a certain balance between likeness and difference; originality permitted in some things, conformity to type demanded in other things; a little "socialism" here, a little "individualism" there; but above all, nothing too much; moderation in all things! Whereas from the standpoint of rational self-consciousness or self-realization it is obvious that there is nothing to choose between variety as such and uniformity as such; both belong to a way of thinking that is inadequate and irrelevant to the problem.

Or, again, consciousness may be inserted into the situation in the form of what the particular specimen of humanity wants to "be", in comparison with what he is, and of advice to him to insist on being what he wants to be, and to other people to defer to him in this. We even get the imperative "Be yourself!"—as if on the structural view one could ever be or become anything else. What this "self" is understood to be is sufficiently indicated by youthful preferences, the more youthful the better, in such things as occupation or general mode of life. The test is the occurrence of disturbances in later life, which are traced to the frustration of the original desire. The whole psycho-analytic handling of this question would seem to be based on the assumption that, whatever the inevitable defects of human knowledge on all other matters, each person has somehow from the first an exact knowledge of his structural self or equipment, a knowledge which is only obscured by later "social" influences. (Puzzle—When is the individual *not* social?) On a view like Adler's theory of inferiority, it would appear that this positive self-knowledge, this revised version of the old "academic" self-consciousness, extends to a complete acquaintance *a priori* with the comparative quantitative rating of the subject's particular outfit of the generic qualities. A man may make a show of belief in his equality with his "natural" superiors, but, in his heart of hearts, this is the one point on which he is never deceived. Thus the "old idealist" contention that in respect of his mind or reason man possesses all truth in germ is made down by the psycho-analysts to a similar claim with respect to the truth about one's personal biological valency, coupled, however, with an abandonment to agnosticism of what we can grasp of the meaning of general nature and history. Some people find idealism incredible, but I suggest that it is outdone on that score by its modern psychological substitutes.

Unfortunately, however, for all these compromises, it is impossible to introduce consciousness into a situation and leave its other terms unmodified. When we adopt the standpoint of conscious experience, it demands supremacy. The impossibility of blending the structural conception of self with that which is secured from the immanent standpoint of consciousness is so clearly and piquantly brought out by Professor W. E. Hocking in the special case of the conception of Instinct,[1] that I ask liberty to introduce here an extended quotation, selecting those passages in which the contrast is most strongly emphasized:

> "If . . . we try to approach a definition of instinct from the side of our own experience we find it awkward. Try to enumerate the items of your own stream of consciousness that you regard as instinctive, and the reason for this will become clear. Unless we are exceptionally instructed —or sophisticated—individuals, we do not label our instincts by that name when we are using them. When we are angry, it seems to us the reverse

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[1] "Human Nature and Its Re-making": Appendix—"On the Dilemma in the Concept of Instinct", pp. 442 ff.

> of an irrational course of conduct: it seems rather the reaction of reason itself to the irrational behaviour of others—we know nothing of an 'instinct of pugnacity' in such a moment".

On the other hand, our attribution of "instincts" to ourselves is always metaphorical. As Professor Hocking further says:

> "The recognition of instincts in ourselves is greatly aided by the rôle played by the non-rational in the *social context* of our lives. There are the common interests which obviously help us to understand one another without elaborate explanations, to work and play together, to build intricate social arrangements on safe calculations of what human beings will want and do, and to be amused at the familiar, strange ways of the whole human tribe. It is this quasi-cynical interest (characteristic of all psychology) which a man takes first in his fellows and later in himself, that accounts for the inescapable attachment of the conception of instinct to the mind, where naturally it is a stranger. In its use, in the mental field, we have a striking instance of the disposition of mature human self-consciousness to make a mythology of itself, and to fill itself full of hidden mechanisms which it conceives as springing perpetual surprises upon its unsuspecting person. Mankind dearly loves a little machine which it can substitute for itself when it tries to think about itself. And if the machine has trap-doors which conceal a subterranean chamber full of dynamos and secret springs, and guarded by a jealous, sycophantish, and otherwise stagely-villainous censor engaged in tyrannical repressions, the mythology acquires all the fascination of a detective story. . . . No one who has taug t any subject with a strain of psychology in it can have failed to notice the almost complete docility with which most students will accept doctrines about what they are made of and their almost eager readiness to believe themselves full of 'complexes', and other phantasms of the living. . . . It is necessary to be clear that all such behaviouristic elements are imported—not found in the natural output of introspection—if we would see the nature of the difficulty of the conception of instinct on its mental side."

It will, of course, be evident that the same predicament must arise when we try to "present ourselvss to ourselves" in terms of "capacities"—for example, the "intelligence" of the mental testers—as emerges when "specific tendencies" such as "the instincts" are in question. In particular, the moral dangers of this way of thinking of ourselves are sufficiently familiar.

If now, however, we consider what is the practice whose theoretical bearings the psycho-analytic concepts are put forward to represent, we find that, to the extent to which it is commonly adjudged successful, the procedure completely bears out the traditional standpoint of the "academic" self-consciousness, and leaves behind the morbid vulgarity of the modern "self-knowledge". When it comes to the actual liquidation of the "complexes" or other structures, what has to happen is that the individual shall come to see the source of the trouble in terms of an event in experience, and the trouble itself as amounting to an erroneous interpretation of that event; its assignment to the wrong place in reality. It would seem, indeed, that there is something morbid about any form of the structural view as taken by us of ourselves, and that the cure always comprises a shift from the structural to the objective standpoint, or, in Hegel's phrase, from substance to subject. I would not be understood, when I speak of wrong interpretations, to homologate the contentions of the psycho-analysts in so far as they interpret the curative process of "abreaction", as they call it, to imply the illusoriness of guilt, or to mean that the sufferings of their patients are necessarily undeserved. After all, if once we admit the standpoint of responsibility at all, we find that we cannot consonantly with the validity of the law of causation assign to it any theoretical limits whatever, either in scope or in magnitude. Any limits to a man's responsibility are in fact limits to the extent to which he is held responsible—a matter of policy determined by historical considerations of expediency, and always of the nature of a concession or pure act of grace. If anyone is led or driven to feel a burden of responsibility beyond these limits, it is certain that no one else can refute him. The best such another can do is to share it. Jesus Christ himself could do not more for humanity than to take upon himself the sins of the world; he could not annihilate them. If this is judged a doctrine of hell-fire, assuredly I am content to be on the side of hell-fire.

If, then, we are to allow any validity whatever to the standpoint of conscious experience, we cannot at the same time grant any but an inferior and provisional degree of truth, especially dangerous in questions of practical application, to the way of thinking that presents human activity as a play or display of qualities, or human individuality as a particular outfit of the same. This latter is what no man can safely or coherently think himself to be, nor, in proportion as other men belong with him in any genuine community, can they so think of each other either. The nearest we can come to the recognition of structural limitations in ourselves or our genuine associates is something of the nature of a habit or institution, recognized as resulting from some specific action (or failure to act). At this point, we may say to ourselves, I got stuck, because I (wrongly as I now see) acted thus rather than thus; because I followed up that objective interest rather than this, and so on. By no analysis of the concrete world of conscious experience can we reach a point at which activity terminates in blank structure or quality; we might as soon try to conceive a beginning of consciousness in time.

All this suborning of consciousness to the promotion of schemes of self-knowledge, self-development, adaptation of or to "individuality", etc., neglects, in reality, to notice the first thing about consciousness. It ignores the negative. A mere substance, or particular as such, can go on being itself, or developing, or expressing its qualities, in isolation. But a subject, to be a subject, must be confronted, checked, "repressed" if you like, by an objective order. It must recognize and grasp the universal, which is the common or communicable (an act which is the source of all communities). Moreover, it is only in reference and in deference to the common that the subject becomes self-cognizant and achieves its proper satisfaction in being at one with itself. But it is precisely in this state, or rather in the activity of its continual achievement, that individuality for us human beings consists. Individuality, in short, is the life of reason. Represented as a process in time (to which there is no objection provided it be recognized that it is a process which is always going on), this is the process by which the particular becomes the individual through its negation by the universal. But mind or knowledge, the subject-object situation, is the only medium in which this negation can be conceived to happen. It cannot be represented as the mere subsumption of the particular as an instance by the universal in the form of a type or law. That may occur for a subject, but never to a subject. It is rather the confrontation of the particular as subject by the universal as object. Individuality depends on the realization of a common world ; only thus can the particular be secured against disruption from without. But this process involves the liquidation, the rendering in terms of act, of qualification rather than of quality, of that structural fixation and limitation which gave the particular its character as an apparent subject for external manipulation.

But this negative movement, the supersession of particularity in knowledge and in community, is just what the so-called individualist doctrine of contemporary irrationalism is most anxious to repudiate. It prides itself on the unsullied positivism of its outlook : the only negative thing it will own to is its denial of universals. Its main concern is to shield from contamination the little bundle of putative powers which it calls the nature of a man. Thus the exponents of this position have a rooted suspicion of everything that would subject to general regulation the self-expression of the particular as such. The repression of "instincts" and impulses is regarded as so much pure loss. In the field of educational theory, where this school still flourishes, any attempt at formal discipline, the inculcation of knowledge (which is stigmatized as "cramming", or "mere instruction" as contrasted with "true" education), the institution of formal examinations—all this is regarded in the light of something opposed to nature. All these traditional methods, it is argued, are either malignantly successful or wastefully unsuccessful attempts to prevent "the individual" from being his individual self. Even when the advocates of this view are confronted with cases which seem to show real progress and satisfaction under such conditions, they merely fall back a step and say that there are some "types" whose peculiarity it is to respond to the universal, and other "types" whose peculiarity it is not to do so. In other words, the universal is to be administered in those cases in which, by hypothesis, there is no need for it to exercise its characteristic disciplinary function at all. When, we may well ask, is the universal not universal?

Having thus observed how the new individualism misrepresents consciousness, we turn to the second question proposed, what it makes of the correlate of consciousness, community. Here, again, we find a wealth of spurious substitutes. The leading conceptions governing the nature of community which accord with the structuralist prejudice may, however, be brought under two main heads: Specialization of Function, and Racial Identity. As the emphasis on individuality in contemporary psychological projects usually professes to be dictated by the interests of "the community", an analysis of these doctrines as to the basis of community and its demands on the individual will perhaps convey to the promoters of such schemes how it is that, quite apart from any objection to the practicability of the solutions they advance for the problems thus set them, our quarrel is with the problems themselves. Until the latter issue has been settled it is a mere waste of time to argue over the question of whether or not these psychographical devices are successful in doing what they profess to do.

LAUGHTER.[1]

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Any discussion of laughter must inevitably begin with the statement that laughter is nothing to laugh at. It would indeed be difficult to imagine a subject more intricate, more serious, or more important. To it, profound philosophers have devoted much earnest thought, and concerning it they have written many weighty and very solemn tomes. But laughter, an elusive sprite, has for the most part escaped them, and defied their most strenuous efforts to pin it down.

By certain very learned people, laughter has even been condemned. The ponderous Lord Chesterfield, for example, wrote to his son that " in my mind there is nothing so illiberal, and so ill-bred, as audible laughter. I am sure that, since I have had the full use of my reason, nobody has ever heard me laugh ". And again—" laughter is the manner in which the mob express their silly joy at silly things ". To this we can but retort, with Gerald Gould, " me for the mob ".

For laughter ill deserves the contempt of the noble lord. As Bergson has taught us, this gift of laughter constitutes about the only difference of kind between man and beast. Man once defined himself as " the reasoning animal ", but a cow can reason quite acutely. Or he distinguished himself from the beasts that perish as " the tool-using animal ", but those very competent investigators, the Peckhams, have seen a wasp, putting the finishing touches on her nest, seize in her jaws a tiny pebble, and, with this tool, pound down the loose earth around the mouth of the hole. Differences of degree, between man and the lower animals, exist in plenty, but there is only one difference of kind. Man alone can laugh. Confront me with a laughing hyena, and, if the bars be thick enough, I will tell him to his face that his horrible cachinnation is no genuine laughter. Nor does the jackass laugh. Nor, despite our frequent use of the saying, was there ever anything "funny enough to make a cat laugh".

Moreover, as Bergson has also taught us, man is the only animal, indeed the only thing, that is laughed at. To this last statement the reader may wish to object. He would assert, perhaps, that he has many times laughed at the violent colour scheme of a tie, or at the prodigal volume of that particular type of trouser first perpetrated at Oxford. We may step aside to hope that Oxford bags will soon join the many other "lost causes" for which Oxford is famous. However, a little thought will soon convince the objector that it is neither the wisp of silk nor yet the acreage of tweed at which he has laughed, but rather the human caprice that could design the tie or the trousers, or that could permit their owners to appear in them. Similarly, whenever we have apparently laughed at a lower animal, it has always been at an animal caught aping his lord and master, at an animal come across in a characteristically human attitude. The point is sufficiently illustrated by the case of the hunter who, passing through a narrow ravine, was narrowly missed by a tiger, the tiger leaping a little too high. When next the hunter approached that spot, he pushed a cautious nose around the corner prior to venturing into the ravine. He was interested to observe the same tiger practising low jumps.

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[1] Written from the notes of a lecture given before the Sydney Local Branch of the Australasian Association of Psychology and Philosophy. The lecture was advertised as a "popular" one. No one reading this article is justified, then, in condemning it for lack of profundity. Anyone may condemn it, however, who finds nothing in it which makes him grin.

Should any further proof be needed that laughter is important, it would suffice to mention man's pride in his sense of humour. Call the average man a liar, a rogue, a profiteer, a philanderer, or a lazy good-for-nothing wretch, and he will smile at the soft impeachment. But question his sense of humour, and he is mortally offended. Laughter well merits a little attention.

Brief consideration may first be given to the theory advanced by McDougall, that laughter is not an expression of pleasure, but rather the reverse. The things we laugh at, McDougall tells us, ludicrous and undignified things, would be very likely to displease us, did we not laugh at them. He reminds us that, in order to live together more or less amicably in society, we must be endowed with sympathy, we must be ready at any moment to share with another his miseries and sorrows as well as his joys. But, given sympathy alone, we would be chronically miserable, and our nerves would be constantly jangled by the trivial misfortunes of other people. For example, when a portly and dignified gentleman, encountering a banana-skin, takes a seat quite involuntarily upon the hard and unyielding concrete, or indignantly pursues the hat of which he has been bereft by a pesky puff of wind, given only sympathy, we would be obliged to experience the angry misery of the victim himself. Instead, we laugh. And why not, since the unfortunate is injured only in his excessive dignity? Laughter then, according to McDougall, is Nature's corrective of excess sympathy.

The theory is interesting, if not complete. That McDougall can propound it is good evidence of an improvement in mankind.

It is worth while to compare this twentieth-century theory with that which Thomas Hobbes advanced in the seventeenth century, and which found almost universal acceptance at the time.

"Men laugh often, especially such as are greedy of applause from everything they do well, at their own actions performed never so little beyond their expectations; as also at their own jests, and in this case it is manifest that the passion of laughter proceedeth from a sudden conception of some ability in himself that laugheth. Also men laugh at the infirmities of others, by comparison wherewith their own abilities are set off and illustrated. Also men laugh at jests, the wit whereof always consisteth in the elegant discovering and conveying to our mind some absurdity of another; and in this case also the passion of laughter proceedeth from the sudden imagination of our own eminency. For when a jest is broken upon ourselves, we never laugh thereat. I may therefore conclude that the passion of laughter is nothing else but sudden glory arising from some sudden conception of some eminency in ourselves, by comparison with the infirmity of others."

Hobbes would have us believe, then, that laughter is due to man's lack of sympathy; McDougall, that it was added as a check upon excessive sympathy. Without unduly flattering human nature, we may perhaps agree that McDougall's theory comes nearer to explaining present-day laughter. In breaking this lance for human nature, we may call to our aid the poet who sang:

"And if I laugh at any human thing
'Tis that I may not weep;"

also that prince of laughers, Anatole France, who found excuse for his own scoffing at human foibles in the statement—"*Il faut en rire, pour ne pas en pleurer.*"

It does seem reasonable to claim that laughter is becoming more refined. To be sure, it is still, all too often, cruel. But the hunchback and the idiot are no longer regarded as causes of justifiable merriment, and, despite the pessimism of Hobbes, we do very occasionally, if only very occasionally, contrive to laugh at ourselves. Wherefore it is possibly worth while to repeat Gerald Gould's warning that we must beware of attempting to refine laughter too far. Other innate tendencies, it would seem, can be checked, controlled, and sublimated at will, without our running any risk of their disappearance. At the moment, chemists are threatening to displace the succulent pork chop by a pellet of protein. May the gods defeat their end, and vitiate all their experiments! All my sympathy is with:

"The young lady of Munich
Whose appetite simply was unich.
'I do so love food',
She contentedly cooed,
As she let out a tuck in her tunich."

The taking of food is not only a delightful source of innocent merriment for the individual; it also affords an opportunity for social intercourse which we can ill afford to lose. But even if the chemists achieve their impious end, we must still eat something. On the other hand, as Gould points out, to refine our sense of humour beyond a certain point would be to lose it. If laughter is to remain at all, it must remain a thing of the earth, earthy.

Consequently, if we are to continue to laugh, we must continue to laugh at things which are not at all pleasant. Drunkenness, for example, is a stupid thing, and blasphemy is a thing to be deplored. Yet such things as these will long continue to provide the majority of the laughs of the average man. Who, not having heard it before, could refrain from chuckling at the following story? An American citizen, jay-walking, received a solid bump in the vicinity of the hip from a speeding automobile. Leaping to the footpath, he was horrified to feel something trickling down his leg. "Gee!", he said, "I hope that's blood." Similarly, who can refuse to grin at the numerous stories of which the point consists in some more or less blasphemous remark passed in all innocence by a small child? For example, a small girl, who was to sit at dinner next to the bishop, was warned beforehand to address him properly as "my lord". Somewhat confused when the great man suddenly turned to ask her age, the child replied—"My God, I'm eight." Again, although sexual promiscuity is a beastly thing, it will probably be many years before the "smutty" joke and the suggestive story lose all their popularity. In any case, there is surely something of humour in the limerick concerning

"The young lady of Joppa
Who came a society cropper;
She went to Ostend
With a gentleman friend;
The rest of the story's improper."

The smutty story, the blasphemous joke, the laugh of derision at the pompous, the laugh of superiority at the stupid—all these must probably remain. But the smutty joke will need to be more humorous and less smutty, the irreverence of the joke against the gods less blatant, the stupidity at which men will laugh less pitiable.

A discussion of laughter must include some mention of the theory of Henri Bergson. Briefly, Bergson finds the key to all comic situations in the one concept of rigidity, inelasticity, or non-adaptability. There was mentioned above the lamentable case of a portly and dignified old gentleman slipping on a banana-skin. The rigidity or inelasticity is here obvious. Were the old gentlemen sufficiently elastic, he would quickly recover his imperilled balance, and there would be nothing to laugh at. According to Bergson, rigidity or non-adaptability is to be found not only in such a crude example of the comic, but in all, or almost all, humorous situations. The rigidity need not be physical ; it may be mental, as in all jokes concerning absent-minded professors. Further, the rigidity may be simply assumed, as in all jokes which swing on a refusal to see the point of an argument. There may be cited the clerk who, coming late to work, requested his employer to excuse the lateness, on the grounds that his wife had selected that morning to present him with twins. " Inexcusable, Mr. Jones, most inexcusable ", replied the employer. " One would be bad enough. But to set two of them a bad example. Quite inexcusable ! " So too, since the mind is more supple than the body, and the body more mechanical and rigid, any reference to the body, when it is the mind which is in question, is likely to prove comic. Hence it completely ruins an impassioned oration if the orator sneezes, and the hero in a tragic play is never known to eat or to drink, and he scarcely dares to sit down. Similarly, the same word may be used, now literally, now metaphorically, and many jokes derive their point from the taking literally of a word used metaphorically. An old story which more or less illustrates the argument concerns a golfer who asks his caddy—" Isn't that the new member ? " " Yes ", replies the caddy, " swore hisself in yesterday ". Bergson is very ingenious in revealing the element of rigidity in most comic situations, and he claims that laughter is the natural corrective of this rigidity.

The Freudian, of course, explains laughter as a means of escape for repressed tendencies, an indirect expression for impulses which, either temporarily or permanently, are forbidden direct expression by the conventions of society. This theory, doubtless the most important of all, enables us to comprehend the popularity of smutty and irreverent stories. There comes to mind, an echo from childhood, the tale of the boy who was slipping very rapidly down the side of the roof on to which, in his disobedience, he had climbed. Imminent danger lent him piety, and he prayed—" Lord, save me, save me." Then, a minute later—" It's all right Lord, I'm caught on a nail." Stories such as this usually win a much louder laugh than the wit of them deserves. The reason is that, at any thought or mention of the Deity, man's normal response is that of self-abasement, assertion being suppressed, held in check. Consequently, when that small boy, in the casual conclusion of his prayer, places himself on terms of equality with his Maker, suppressed self-assertion finds joyous escape in a laugh. Similarly, it is the hush-hush policy which helps to give the smutty story its undoubted vogue.

In providing an indirect expression for impulses denied direct expression, laughter frequently serves a much better purpose than tha of a mere safety-valve. Social reformers of all ages have found ridicule a most potent weapon. Charles Dickens, for example, would have liked nothing better than by violence to remove many of the social evils of his day, but the method of direct attack was forbidden him. Unable to destroy them by main force, he laughed them out of existence.

The psycho-analyst has much more to tell us concerning wit and laughter than merely this general theory of indirect expression. But it is not my present purpose to set out any particular view in detail; rather is it my aim to present summarily, and to illustrate, a variety of theories. I shall therefore devote what little space remains to a brief consideration of the views of one or two other people who have thought about laughter.

Max Eastman regards laughter as an instinct, the purpose of which is to act as a refuge when things fail to turn out as we expected. According to him, laughter has the same function for one man as religion for another. It follows from this theory that there are two groups of comic things, those which happen when they are not expected, and those which, being expected, do not happen. Consequently twins are funny, since, in the words of the immortal Josh Billings, "there are two things a man never expects, and them is twins". It is very evident that their element of unexpectedness constitutes the charm of most good jokes. In Eastman's phraseology, two currents are awakened, one positive, the other negative. The positive current is not satisfied, but the negative is. One of the best illustrations is the tale of the man who had been greatly annoyed by a gang of "toughs". On a certain evening the gang had assembled in a public-house. Their victim announced his firm intention of throwing them all out, and took along a friend to count the bodies as they appeared. The friend took up his position outside the door; the hero entered. A terrific din ensued. Then a body hurtled through the swing doors, and met the pavement in sickening collision. "One", counted the friend. "Stop counting", said the hero, "it's me." The positive current awakened is our delight in heroic deeds, in the "*beau geste*", while the negative current satisfied is our human pleasure at the downfall of the cocksure.

In a very interesting book on "The Springs of Laughter", Kimmins reviews most of the theories that have been advanced to explain the phenomenon. But the most attractive feature of the book is his account of his own researches into the sense of humour of children. Children of all ages were asked to describe the funniest sight they had ever seen, and to tell the funniest story they had ever heard. The responses afford very interesting information concerning the development of humour with age, and give the reader an excellent opportunity to measure the stage of his own development in this regard. For example—"I saw a fat man running for a bus. He jumped on, but couldn't hold on and fell off in the mud. Oh! I did laugh!" Anyone very tickled by the humour of this delicious incident has attained a laughter-age of five years. Again—"The funniest sight I have seen is when my mother fell out of the hammock, but she didn't hurt herself much." That is on the eight-year-old level. To appreciate to the full the following anecdote, it is necessary to have attained a laughter-age of eleven years. A bishop came across a small boy making an elaborate edifice of mud. Asked what he was building, the boy explained that it was a cathedral, and he pointed to the leaded windows, the organ, and the seats for the choir. "But where", asked the bishop, "is the bishop?" "Haven't got enough mud to make a bishop", replied the craftsman.

Kimmins presents also an interesting comparison between what is thought comic by English children, and what appeals to American children. Three main differences were noted. Among American children there were reported more gross exaggerations than among the English. For example: A city girl went to stay at a farm. There was honey on the table at the first meal. Anxious to show that she was not altogether ignorant, the city girl remarked—"I see you keep a bee." Having in mind the difference between the humour, say, of Mark Twain, and that of the London *Punch*, we can understand the greater number of exaggerations occurring in the stories reported by American children. Since the other two differences are that the American children tell more stories concerning domestic unhappiness and prohibition, they are probably even less difficult of comprehension.

A few theories concerning laughter have been advanced and illustrated. Probably this flippant article has thrown little light on our obscure problem, but possibly sufficient has been written to leave no doubt concerning its importance. It is certain that, without laughter, the world would be much the poorer. Our Charley Chaplins, our Harold Lloyds, and our Jimmy Goddens are genuine and valuable practising psychologists. Indeed, Charley even has a theory, to the effect that what is comic is the truth. He points out that when a haughty and over-dressed lady gives him, in his rags and tatters, a supercilious examination through her lorgnette, and he throws a custard pie with his usual uncanny accuracy, the situation is comic because there you see truth naked and unashamed. For that is precisely what Charley would like to do. The theory is, of course, similar to that of the Freudian. Moreover, it contains a big element of truth. Men are such liars that the truth is very often funny, although, happily, not always.

I should perhaps conclude by repeating the warning issued above, that we should beware of attempting to make laughter ultra-refined. I should repeat it especially to students of psychology, since psychologists are the criminals who are attempting to banish laughter. So I would impress upon those of you who are psychologists that, if you so train children as to remove all pomposity, all folly, all sex-repression, all fear of the Lord, and all other human foibles, you will drive laughter from the earth. You are asked to stop short of making the world perfect, since in a world that was perfect there could be no occasion for laughter. However, fortunately or unfortunately, we can probably, with all safety, bid you do your worst, or best.

THE EARLY STOICS.[1]

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THE prevailing notion of Stoicism is that which is given by works written under the Roman Empire, the Dialogues and Epistles of Seneca, the Discourses of Epictetus, and the Thoughts of the Emperor Marcus Aurelius Antoninus. The appearance of the first English translation of Epictetus, that of Elizabeth Carter in 1762, was an event of some importance in the history of thought in England. English translations of the Greek masterpieces of poetry, history, and oratory existed at the time in abundance; but before the middle of the eighteenth century very little of Greek philosophical literature was accessible in England to those who could not read Latin.[2] Attention was drawn to Miss Carter's work by the mere fact that a woman had produced not only a translation, but a good translation, of a Greek philosophical work of some length and difficulty; and its manly tone was a useful corrective to some of the tendencies of the religious thought of the period.

In the nineteenth century Stoicism was widely popularized among English readers by works like Farrar's "Seekers after God". In our own day it evidently meets a real want, and translations of Epictetus and Marcus Aurelius have a recognized place among devotional text-books. But what we get in such works is Stoicism as remodelled in the second and first centuries before Christ by Panætius and Posidonius. In this form Stoic teaching found its way to Rome in the generation of Cato and Cicero, and gave to the nobler souls among the Romans something in the nature of a religion to rest on, when their political world had fallen in ruins.

There was much in the moral creed of the Stoics which appealed to the best traditions of the Roman character, and in its new home the system received an atmosphere, in which the modern world can breathe more freely than in that of ancient Athens. The present paper is an attempt to deal, not with these later developments, but with the rise of the Stoic philosophy in the Greek world, with the men who introduced it, and with its characteristics as a systematic attempt to offer a simple solution for the problems of the universe.

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[1] This paper is based on one which was read to the Brisbane Classical Society in 1926.

[2] A translation of the Meditations of M. Aurelius by Méric Casaubon appeared in the seventeenth century, and one by Jeremy Collier in the early part of the eighteenth. But neither of these works attracted the general attention which was drawn to Miss Carter's work. The earliest part of Floyer Sydenham's translations of Plato appeared in 1759.

To make these men and things intelligible, some notion must be formed of eastern Europe and western Asia, as they were at the beginning of the third century before Christ. The later decades of the fourth century had brought wholesale changes to those regions. The conquests of Alexander the Great had been followed by a rapid spread of Hellenism throughout a large part of what had been the Persian Empire. The policy, started by him, of creating great cities with a large Greek element in their population, was continued by his successors. These became centres from which Hellenism was widely diffused; and the newer and more brilliant culture of cities such as Alexandria, Pergamum, and Antioch tended more and more to eclipse that of the old city states of Greece and the Ægean.

In this general decline of the older states, Athens still retained a shadow of her former greatness; though robbed of all substantial power, in philosophy she was still the centre of the Greek world. That pre-eminence meant more then than it would now. Plato's Academy had attracted pupils to Athens, not only from the older states, but from the colonies far and wide, and had made philosophy a force to be reckoned with and utilized. The younger Dionysios, when he wished to re-organize his Syracusan Empire, had applied to Plato, and, though the philosopher's visits to Syracuse had proved a failure, his pupils continued to be in demand as legislators. Aristotle, after working under him for twenty years, had, after his death, been tutor to Alexander, and had then returned to Athens to found his own Lyceum as a rival of the Academy. The prestige of the two Schools was maintained by the successors of their founders, and continued to attract seekers after knowledge to Athens.

PREDECESSORS OF THE STOICS; THE CYNICS.

The teaching on which Stoicism rested its foundations was neither that of the Academy nor of the Lyceum. Socrates had other hearers besides Plato. There were those to whom the essence of his teaching seemed to be that philosophy must be confined to the task of showing men how to live their lives, of discovering the end at which they must aim and the way by which it can be attained. One group, headed by Aristippus of Cyrene, had found the end in pleasure. This seems startlingly different from the teaching of Socrates; but Plato's Protagoras represents Socrates as seriously discussing the question of founding his ethics on a balance of pleasures and pains.

A second group was that of Antisthenes, who confined the good to virtue, and taught that the end was to be reached by living according to nature, and reducing one's wants to the minimum which life requires. Socrates himself had endured hardness, had gone unshod, and worn a single garment summer and winter. Under Antisthenes this dress and manner of life became the rule of a school, whose members let their beards grow long, limited their dress to a short cloak, slept wherever they could, lived on scraps which they begged and collected in a wallet, abused coarsely those who met them with a refusal, and carried a stout staff to protect themselves against any who attempted to retaliate. Many went further and deliberately outraged all those decencies of life which civilized man has adopted. They soon received the nickname of Cynics, which, whatever its origin, served conveniently to describe the dog's life which they led. The Cynic was the parent of the Stoic, and in a later age Juvenal could see no distinction between them except that the Stoic conformed to custom by wearing a tunic under his cloak.

Unattractive as the life of a Cynic seems, Antisthenes and his more famous disciple, Diogenes, had no lack of followers. Two classes of men were drawn towards their school—the genuine ascetic, and the sturdy beggar. Asceticism made, as it always makes, a strong appeal to characters of a certain type. It called for no exceptional powers of mind and none of those preliminary courses of mathematics or other difficult studies, which occupied the earlier years of pupils of Plato's Academy. At the same time a routine of self-denial, voluntarily carried out, has an ennobling influence on the mind; and the teaching which inspires it, comes as a new gospel to those who feel the want of a weapon with which to fight their passions, or of an ideal to raise them above themselves.

The same teaching may also draw from the spade or the plough not a few who are ready to purchase, at the cost of some hardship, a life of permanent idleness. The begging Friars made men of this type familiar in mediaeval England, and the following extract from a letter of Alciphron (III, 40) is worth quoting for its picture of a Cynic of the same kind.

Philometor to Philisos.

"I sent my son to the city to sell firewood and barley, giving him particular injunctions to return by the same way, bringing the cash with him. But the wrath of some god fell upon him and completely robbed him of his wits. For seeing one of those madmen, whose raving lunacy has earned for them the title of dogs, he has in his imitation gone beyond the chief master of that school. He is an appalling and dreadful spectacle, shaking his untidy locks, casting savage glances from his eyes, half naked in his short cloak, with a wallet strapped to his side and a club of rough pearwood in his hand, bare-footed, idle, denying all connection with his parents and their farm, saying that all things are brought into being by Nature, and that the cause of birth is not parents but the mixture of the elements."

For five hundred years or more the aggressive Cynic continued to be a conspicuous feature in the life of the cities of the Greek world. But they were not all of the type held up to ridicule by Alciphron, Lucian and the satirists. A different picture will be found in the chapter on Cynicism in the 3rd book of the Discourses of Epictetus. Though he is always classed with the Stoics, there can be seen in Epictetus a reaction to the simpler doctrines of the Cynics; and his teaching was for the most part confined, like that of Antisthenes and Diogenes, to practical lessons in Ethics.

NEED OF A DOGMATIC FOUNDATION.

But human nature is not content with a theory of morals which has no foundation outside itself. Man cannot shut his eyes; he must have a theory of the universe. It is only the few who can think out such a theory for themselves; for the majority it must be a ready-made system with fixed dogmas. It is not surprising that the generation, which followed Plato and Aristotle, saw the rise of two dogmatic philosophies, in which old material appeared in a new dress. Epicurus based the gospel of pleasure on the atomic theory of Democritus; Zeno, the founder of Stoicism, went back for his first principles to the flux of Heraclitus. Both made important changes in what they adopted, and each left to his school a system which was intended to be permanent, and which in its stereotyped character resembles the scholasticism of the Middle Ages.

ZENO.

Zeno was a philosopher of a new type. His predecessors were many of them men who came from the colonies, some of them from remote places, as Diogenes from Sinope. But they were all Greeks. Zeno was a barbarian—a Phœnician from Citium in Cyprus—an insignificant-looking man, with a slight body and dark complexion. Cyprus is within sight of Cilicia; and it is natural to compare Zeno of Citium with Paul of Tarsus. The parallel is worked out by E. Bevan in his "Stoics and Sceptics", who points out that Paul's speech at Athens not only quotes words from the Stoic poem of Cleanthes, but reproduces the substance of a widely quoted saying of Zeno himself—that "we ought not to build temples to the gods; for the word 'temple' (ἱερόν) means something holy and precious, which cannot be made by human builders". But the two men had little in common beyond the fact that they were both orientals of insignificant stature, whose voices were heard at Athens. Paul, full of a fervid faith which distrusted human knowledge, believed himself to be in possession of truths more precious than those of philosophy. Zeno came to Athens with an open mind, and studied for twenty years before he began to teach.

The story of his arrival at Athens is told in slightly different forms, and allowance must be made for the fact that legends gather round the doings of philosophers. But in the case of Zeno there is no reason why we should not accept the traditional tale as told by Diogenes Laertius (VII, 2). According to this, Zeno was a merchant dealing in Phœnician purple, who, while still a young man of thirty years of age, came to the Piræus, having suffered shipwreck somewhere in the neighbourhood. From the Piræus he went up to the city of Athens, and, while sitting in a book-shop, heard the bookseller reading aloud the second book of Xenophon's Memorabilia. Zeno was delighted with what he heard, and inquired where men were to be found who talked like that. "Follow that man", said the bookseller, pointing to Crates the Cynic, who happened to be passing his shop. Crates had succeeded Diogenes as head of the Cynic School. Zeno became his disciple, and was an ardent and persevering student, though his modest and retiring nature made it hard for him to copy the rough ways of the Cynics. To cure his pupil of this defect, Crates made him carry a bowl of pease-porridge through the crowded Kerameikos; and when Zeno tried to hide it under his cloak, his master upset it with his staff, and spilt it over the unfortunate Phœnician. At this point we may have passed into legend; but the story is typical of the rough methods by which the Cynics enforced their teaching.

Zeno did not copy either the dress or the manners of the Cynics; but he was more closely allied to them than to any other school. From them he took the leading principles of his ethical teaching—that virtue is the *summum bonum*, that it is sufficient in itself to make a man happy, that it is to be attained by following nature, and that the wise man is king. He parted from them by including Logic and Physics, as well as Ethics, in his scheme of philosophy, and by substituting temperance and moderation for the extreme asceticism of the Cynics.

How his twenty years of study were distributed among the schools of Athens, we are not told precisely. From his treatment of Logic it may be inferred that he spent some time with the Peripatetics; but the teachers, who, after the Cynics, are specially mentioned as influencing him, are Stilpo, the Megarian, and Polemo, the head of the Academy. From the quibbles of the Megarians he may have derived that tendency towards hair-splitting with which his critics charged him.

When he began to teach, he gathered his pupils round him, not in the seclusion of a school, like the Academy or the Lyceum, but in a stoa or colonnade in the heart of Athens and open to the general view. From this place, called the Stoa Poikile from the paintings of Polygnotus and others which adorned the walls, the School derived its name. Here Zeno was to be seen walking up and down with a small group of disciples. He relied solely on oral discourses; his arguments were thrown into the shortest possible form, and were, no doubt, repeated by his pupils, till they were thoroughly mastered. Here is an instance: "Death is the separation of the soul from the body: but nothing unbodily is separated from body: for nothing unbodily is attached to body: but the soul is both attached to and separated from body: therefore the soul is body."

Cicero is fond of quoting these compressed arguments of the Stoics. If the argument is in the form of a hypothetical syllogism, there is no unnecessary repetition of the words of the premisses; but the argument is concluded with the formula, "The first, therefore the second" (ἀλλὰ μὴν τὸ πρῶτον, τὸ ἄρα δεύτερον). The objects aimed at were exact terminology and perfect certainty; and the method has something in common with that of Seminaries in which Scholastic philosophy is taught.

The special features of Stoic doctrine were illustrated by similes of the simplest kind, as "complete apprehension" (κατάληψις) by the closed fist. These sometimes recall the oriental method of teaching by parables, such as that of the grain of mustard seed. God permeating the world is compared to the honey flowing through the cells of the honeycomb, and the working of Destiny in human affairs to a carriage with a dog tied behind it, which must follow, but has the choice between running or being dragged.

Zeno lived to a little over eighty years of age; if he was thirty when he came to Athens, and devoted twenty years to preliminary study, he must have been teaching for about thirty years. He was a man of private means, and did not live in a tub, as Diogenes did. But he is said to have practised the rigid parsimony of a barbarian. His diet was simple—bread, olives, honey, and a little sweet wine. The phrase "more temperate than Zeno" became a proverb. He was a conspicuous figure in Athens, and was much respected. Although he refused the Athenian citizenship, preferring to be described as "Zeno the Citian", it is said that the keys of the city were put in his charge, and after his death a decree was passed, ordering a public funeral and a monument in his honour.

He won the respect and regard also of Antigonus Gonatas, the king of Macedon, who occasionally visited Athens, and was fond of conversing with Zeno, trying in vain to tempt him to join his banquets and drinking parties. Zeno, we are told, was εὐσυμπερίφορος; that is, he had considerable social gifts. But Antigonus also valued his more serious counsels, and was anxious that the philosopher should come to Macedon and live at his court. Zeno declined; but he sent one of the earliest of his disciples, his Phœnician servant Persæus, to fill for a time the post of philosophic chaplain to the king.

His death was due to a trifling cause. As he was leaving his school, he fell and broke his finger. Quoting the Niobe of Æschylus, he said to the earth, "I am coming: why dost thou call me?" He went home, and brought his life to an end by starvation. The lawfulness of suicide was one of the prominent doctrines of Stoicism, and the lives of several of its teachers were brought to an end by their own act. It is curious that in most of these cases, as in that of Zeno, the reason for the act was of the most trivial nature. The wisest of men is apt to lose his sense of proportion in dealing with his own case.

PUPILS AND FOLLOWERS OF ZENO.

None of the works of the early Stoics have been preserved in a complete state, and for the details of their teaching we are dependent on the statements of later writers and the fragments, often extensive, which these quote. The two principal Greek sources are the long life of Zeno, which passes under the name of Diogenes Laertius, and Plutarch's Moral Treatises. The first of these, in spite of some glaring defects, gives the most complete description which we have of the Stoic philosophy as a whole. Plutarch writes as a confessed opponent and rather captious critic of the Stoics; and the long and numerous quotations which he makes must be regarded as specimens of the least favourable side of their works. In Latin we have an extensive hunting-ground in the philosophical works of Cicero, large parts of which are built up of materials drawn from the writings of the early Stoics.

In these and other writers it is not easy to separate the contributions of Zeno himself from those of his successors. It will be more convenient therefore, at this point, to give a list of his earlier followers and a few personal details of two of the most important names in it. The list itself tells its own tale.

The pupils of Zeno were Aristo of Chios, Herillus of Carthage, Dionysios of Heraclea (on the Euxine), Persæus of Citium, Cleanthes of Assos, Sphaerus of Bosporos (in the Crimea). The pupils of Cleanthes were Chrysippus of Soli (in Cilicia), Zeno of Tarsus, Diogenes of Babylon, Antipater of Tarsus, Apollodorus of Seleucia, Archedemus of Tarsus, Boethus of Sidon. These are the Stoics of the third and second centuries B.C. whose remains are collected in von Arnim's "Stoicorum veterum fragmenta". The striking feature in the list is the number of men from non-Greek cities of the Levant, as Citium, Soli, and Tarsus, or from places still further east, as Sidon, Seleucia, and Babylon. Three of the names belong to Tarsus, where, during the years 100 B.C.–100 A.D., there was an important school of philosophy. Two leading Stoics of the name of

Athenodorus taught there; both of these lived for a time in Rome, the first with Cato the younger, the second with Augustus. A Greek-speaking Jew of Tarsus in the first century after Christ could not help being familiar with scraps of Stoicism; and the author of the Acts of the Apostles, when he put into the mouth of Paul at Athens a speech full of the thought of Stoicism, was writing what, if not founded on fact, was very probable fiction.

Many of the names in this list will be familiar to readers of Cicero's philosophical works. Some, like Aristo of Chios and Antipater of Tarsus, are quoted by him very frequently. Antipater was the teacher of Posidonius, the founder of the later Stoicism, and teacher of Cicero. Posidonius falls outside the scope of this paper: an interesting account of him will be found in E. Bevan's "Stoics and Sceptics". The two names of which something more must be said are Cleanthes and Chrysippus.

CLEANTHES.

Cleanthes of Assos was a man of great physical strength, and in his early life had been a boxer. Our authorities do not say what brought him to Athens. But Assos had its philosophical traditions; two of Plato's pupils were settled there, and an important letter from him was addressed to them there. Two others, better known to fame, Aristotle and Xenocrates, lived there for three years after the death of Plato. Cleanthes, who was separated from Aristotle by less than half a century, and was certainly a man of education, may have gone to Athens as an enthusiast for philosophy. He is said to have arrived there with four drachmas only in his possession, and to have supported himself by pumping water at night, to irrigate gardens, while he attended the teaching of Zeno during the day (Diog. Laert. VIII, 168). He was so poor that the fee for his lessons was reduced to one obol, and his notes were written on potsherds because he could not afford papyrus. He was a slow learner; but what he once learnt he never forgot. He is said to have been Zeno's disciple for eighteen years, and on his master's death he succeeded to the headship of the school, which he held for thirty years. His death resembles that of Zeno. He was suffering from a gumboil, and was ordered by his doctor to abstain from food temporarily. After two days he had sufficiently recovered for the doctor to order him to take food again. But he said that he had gone so far on the road, that he might as well complete the journey, and continued to abstain from food till he died.

Cleanthes is best known for his hymn to Zeus, a short poem of thirty-nine hexameter lines, which has been preserved in full by Stobæus. Zeus, for him, is not the god of popular mythology, but a material fiery breath streaming through the universe, the source of its being as well as of its life and motion. Zeno, as we shall see, had identified this with reason, law, and God. To Cleanthes both Zeus and his thunderbolt are allegorical representations of this rational but material current. The hymn is a noble piece of philosophical poetry; its author must have been a powerful thinker with deep religious feelings. The following is a rough metrical version of it:

Hymn to Zeus.

Most glorious of Immortals, many-named,
Almighty ever, Nature's captain, Zeus,
Who guidest all things with the helm of law,
Hail! For all mortals may by right address thee;
Thy offspring they; to them alone is given,
Of death-doomed beings that live and move on earth,
The art to frame sound-copy of their thought;
Therewith I'll ever hymn thee and thy might.
Thee the great world, that circles round our earth,
Obeys, and shapes its will to thy control;
Such servant hold thy hands invincible,—
Thy two-edged, fiery, everliving bolt,
By stroke whereof all nature's tasks are wrought,
Her reason moved, which, passing through the whole,
Blends with her greater and her lesser lights,
And interfused through all makes thee supreme.
No work is wrought on earth without thy doing,
Nor in the seas, nor in the starry heavens,
Save acts of folly done by evil men.
Nay, but thy skill to even brings the odd,
Orders disorder, brings love out of hate:
Thou hast joined good with evil in one whole,
A single everlasting harmony.
Heedless of this, evil men go their way,
Ill-fated, craving ever to grasp the good,
But blind and deaf to God's all-ruling law,
Which, if men follow reason-guided, gives
The good life here and now.—
Fools, that go running after this and that,
These struggling each with each in fame's pursuit,
These in unseemly scramble grabbing wealth,
More chasing ease and body's tempting joys,
All finding evil, though moving various ways
In hot pursuit of evil's opposite.
Thee, cloud-veiled wielder of bright lightning bolt,
All-giving Zeus I pray deliver men
From their own cursed folly; scatter its clouds,
O Father, from their mind, grant them to find
Wisdom, whereby thy just rule guides the whole,
That we in turn may honour quit with honour,
Our ceaseless hymn the praise of all thy works,
Fit theme for mortals, and for Gods no less:
Nor Gods nor men have nobler task than this,
To hymn aright the law that orders all.

Cleanthes was evidently fond of throwing his thoughts into verse. Many of his fragments are in iambics; and some of his ethical treatises were in the form of poetical dialogues. His prose fragments included a good deal which is connected with religion,—proofs of the existence of God, which resemble the Natural Theology of the eighteenth century, and explanations of the stories of Greek mythology. Among the latter is a very modern interpretation of the Labours of Heracles as a solar myth. Like Zeno, Cleanthes was highly respected and was not forgotten after his death. Simplicius, the Platonist, who lived seven hundred years later and was the author of a good commentary on Epictetus, mentions that he saw at Assos a wonderful statue of Cleanthes, put up by a decree of the Roman Senate.

CHRYSIPPUS.

Chrysippus was born at Soli in Cilicia, which was the birthplace also of his contemporary, the poet Aratus. Like Zeno, he was an oriental of insignificant appearance; but whereas Zeno was a man of few words, Chrysippus was the most voluminous writer of antiquity and the author of more than seven hundred and fifty works. It is said that he used to write five hundred lines in a day. His writings were the text-books of the later Stoics, and Horace speaks of the whole sect as "*Chrysippi porticus et grex*". He was a great controversialist, and used to press his conclusions to the furthest possible extreme. He used to say to Cleanthes, "tell me your dogmas, and I will supply the proofs of them for myself". The philosophical activity of Athens in the second century B.C. consisted largely of controversies between Chrysippus and the founder of the Middle Academy, Arcesilaus, who singled out for special attack the Stoic doctrine of the perfect certainty of the wise man's knowledge. The Academic view was that the wise man's attitude was one in which judgment was suspended. The controversy occupies a considerable space in the Academics and others of Cicero's treatises, and the Stoics usually get the worst of the argument.

Chrysippus was regarded as the second founder of Stoicism; indeed, it used to be said that if there had been no Chrysippus, there would have been no Stoa (εἰ μὴ γάρ ἦν Χρύσιππος, οὐκ ἄν ἦν στόα). But so far as can be judged from the fragments, he added nothing to the fundamental doctrines of the sect. All that was really vital in their philosophy came from the mind of Zeno. But it was systematized by Chrysippus, who added much new terminology and elaborated details. In Ethics he goes into minute points of casuistry. His Logic makes wholesale reconstructions, recasting the whole of the Aristotelian doctrine of the Syllogism so as to make it start with the hypothetical argument. It is ingenious, and, so far as one can judge from the summary given by Diogenes Laertius, it works out all right; but there is nothing gained by the change, and the Aristotelian rules, like the multiplication table, still hold their own. Such changes, however, serve a temporary purpose by promoting work on the part of learners, who are encouraged by the belief that their system has a special virtue of its own.

DOCTRINES OF THE EARLY STOICS.

(1) *Physics.*

We have seen that Zeno's system was framed in order to provide a rational foundation for the moral life of man, and that it included Logic and Physics as well as Ethics. The order of teaching was Logic, Ethics, Physics. The whole was compared to an egg, of which Logic was the shell, Ethics the white, and Physics the yolk. Logic prepared the intellect, and Ethics the character, for the final study which contained the Stoic theory of the universe and their doctrine of God.

A short summary of their system is all that can be attempted here,[1] and it is better to start by stating the first Principles (ἀρχαί) of their Physics. These were two—the Active or God, and the Passive or Matter, both of which are eternal. Matter (ὕλη) is primordial substance devoid of all qualities. God is the fiery breath, which, like an electric current, runs through matter and gives it qualities. Both alike are σώματα, or what we should call material. The Stoic, like the Buddhist, was a materialist; and for him nothing immaterial exists. But his materialism was not one which treated thought as a mere accident of matter, one feature in "a fringe of sentience, thrown up out of the void by a blind automatism".[2] The material breath or fiery current which he postulated was not a blind force, but was rational. It was, in fact, identical with reason, which also, if it was to be real, must be material. In the Stoic system the whole course of nature, everything that happens in the universe, is produced by the operation of this rational but material current (πνεῦμα) which is sometimes called constructive fire (πῦρ τεχνικόν), sometimes generative reason (λόγος σπερματικός). If the whole process is the work of reason, it must be the best possible process, and it must also be inevitable. It follows that *Reason, Nature, Providence, Destiny, and God are all identical terms.* Virgil puts the language of Stoicism into the mouth of Anchises, when he makes him speak of the world-soul both as *Spiritus* and *Mens.*

> Principio caelum ac terras camposque liquentes
> Lucentemque globum Lunae Titaniaque astra
> Spiritus intus alit, totamque infusa per artus
> Mens agitat molem et magno se corpore miscet.
> (Aen. VI, 724.)

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[1] What follows is based on the Life of Zeno in Diogenes Laertius, XVI, 38 ff.

[2] *The Times,* Lit. Supp. No 1,485, p. 588.

It is the Stoics again whom he quotes in the 4th Georgic, when he speaks of the same power simply as God.

> His quidam signis atque haec exempla secuti
> Esse apibus partem divinae mentis et haustus
> Aetherios dixere; deum namque ire per omnes
> Terrasque tractusque maris caelumque profundum.

This permeating fire, which moves and directs the universe, is also its first cause. But it is not the visible fire, which, along with earth, air, and water, was classed as one of the elements. It is an ethereal fire, which occupies the outer universe, beyond our stellar space. Our universe, according to the Stoic teaching, is not eternal, but periodic. After it has completed its period, there comes a great conflagration (ἐκπύρωσις) and it is consumed by the eternal, ethereal fire. Then in due course a fresh start is made: the ethereal fire, working as generative reason, evolves a new universe, producing the four elements in their order of generation, fire, air, water, and earth. Another vast cycle, in which history repeats itself, follows, and is, in its turn, terminated by another conflagration.

Zeno, like Buddha, taught his followers to avoid all unnecessary and puzzling questions. He meant to leave on one side the whole of that metaphysical structure, which Aristotle had called the First Philosophy. The object of his system was to make a simplification—to provide for the man of ordinary powers a working theory of his visible environment and of his own life as an intelligent and social animal. So long as no very searching questions are raised, his Physics serve their purpose well enough, and after nearly five hundred years could still be accepted by earnest and intelligent men, like the Emperor Marcus Antoninus, as the foundation on which their beliefs rested.

The details of the system were for the most part taken by Zeno from earlier philosophers. The word πνεῦμα came from Aristotle, who introduced it in his physiology to describe a fiery current which he supposed to run like lightning through the blood and to be the medium which conveyed the data of sense to the heart, which was for him the seat of intelligence. The animal spirits, which figure so largely in mediaeval medicine, were a legacy of Aristotle's πνεῦμα. For the main body of his physical doctrine he went back to Heraclitus; but for the dark hints of the great Ephesian he substituted clear-cut statements which left no doubt about their meaning. From this source came the view that things are held together by perpetual motion, as porridge by stirring;—that the universe is a continuous stream of change, element passing into element in a series which starts with fire and ends in fire, and that the material fire is both God and wisdom. But whereas

Heraclitus meant by fire no more than pure flame, Zeno refined it into a fiery essence, which, besides being the source of the fire known to our senses, is also the living principle in everything that has life.

Zeno further expanded the system of Heraclitus by adding to it the periodical conflagration mentioned above. One cannot help wondering if he was indebted for this notion to reports of Indian wisdom. The Hindu also had conceived our universe as being periodically destroyed and brought into being again. He even specified the length of such periods or Kalpas, each of which lasted for 432,000,000 of our years, the Kalpa being one day in the year of his supreme God, Brahma.

(2) *Ethics and Ethical Paradoxes.*

The real greatness of the Stoics lay in the Ethical system for which this foundation of dogma was provided. They were the Methodists of their age. Zeno and a succession of teachers, who for four or five centuries maintained the traditions of the school, constituted themselves a kind of clergy, who taught men by precept and example to systematize their lives, so that their conduct might be always under the direction of the best and worthiest part of themselves. His Ethics followed directly from his Physics. He taught, as we have seen, that all the movements of the universe are directed by a ruling power, which, permeating every part of it, is both material energy and conscious reason, and which, being perfectly rational, must order everything for the best. To this was added the doctrine that man has within him, in his reason, a ruling power which is actually a portion of this material divinity, and that his life must be so organized as to enable the god in him to rule unhampered by other elements in his nature.

This twofold belief was the foundation on which his moral system rested. Up to a certain point he followed the practical teaching of his first masters, the Cynics. For the Stoic, as for the Cynic, the first step in the better life was to form habits of endurance and abstinence. The double maxim ἀνεχοῦ καὶ ἀπεχοῦ, *sustine et abstine*, was one of the first commandments in his rule of life. But Zeno brought both clauses into connection with new principles.

As a believer in Providence, the Stoic must aim at something more than mere endurance. Everything that happens beyond our own control must be welcomed and desired. θέλε τὰ γιγνόμενα, "wish for what happens", was another text which the Stoic was taught to be constantly repeating to himself. This cheerful acceptance of the order of the universe is the first duty of every rational being that forms a part of it. What is good for the whole must be good for the part. The Stoic teaching on this point is exactly reproduced by a passage in the 15th chapter of William Law's "Serious Call":

> "Would you know who is the greatest saint in the world? It is not he who prays or fasts most; it is not he who gives most alms, or is most eminent for temperance, chastity, or justice; but it is he who is always thankful to God, who wills everything that God willeth, who receives everything as an instance of God's goodness, and has a heart always ready to praise God for it. All prayer and devotion, fastings and repentance, meditation and retirement, all sacraments and ordinances, are but so many means to render the soul thus divine, and conformable to the will of God."

In the 10th book of Plato's Laws a long and impressive section is devoted to a justification of the belief in Providence; and Diogenes Laertius states (III, 24) that Plato was the first to use in this sense the Greek word πρόνοια, which the Romans translated "*providentia*". But the Stoics were the first who brought the belief methodically into connection with conduct, and they were certainly introducing a form of personal religion new to Europe, when they taught men, as one of the first steps in the better life, to be constantly cultivating this spirit of cheerful acceptance of what comes from God. The ideal suggests the influence of a theology which was perhaps more Semitic than Hellenic.

The clause in the commandment which orders abstinence, also received a new application from the Stoics. It is an interesting coincidence that Zeno, like the founder of Buddhism, before giving any teaching of his own, spent some time in living the ascetic life with ascetics. Both teachers found that the practice of austerities did not give them the key to the problem which they were trying to solve. Zeno taught that habits of abstinence were necessary, not as an end in themselves or a source of enlightenment, but to enable the ruling part in man to perform its functions unhampered. Reason was for him the distinctive feature in man's nature, and the life according to reason was therefore, in the truest sense, the life according to nature.

But this was not all. Man is by nature also a social animal: his acts, if they are to bring him into harmony with nature, must be social acts. His life must be mainly occupied with these, and not devoted either to the attainment of those ecstasies which are sometimes enjoyed by the ascetic, or to that exclusive pursuit of knowledge, which had been regarded as an ideal by Plato and Aristotle.

Zeno's conception of right and wrong followed directly from his view of human nature. Virtue for him was identical with right reason, vice with perverted reason. He took over from Plato the doctrine that no one is willingly bad. He would have approved of the Ethics of men like Price or Cudworth, and strongly disapproved of the doctrine of a moral sense, as held by Shaftesbury and Hutcheson. Here, again, his teaching coincides closely with that of the mystic, William Law, with whom it is a fundamental point that true religion is nothing else but simple nature guided by right reason. We may compare the dictum of Pascal: "*Travaillons donc à bien penser: voilà le principe de la morale.*" When Milton made the Archangel Michael speak of "Virtue which is reason", he was perhaps intentionally making him a Stoic.

It is strange that Zeno, who had moved much among men, did not reflect more on the fact that fine reasoning powers are often found in conjunction with selfishness, meanness, and cruelty, and even with the most degrading forms of self-indulgence. He might have drawn the inference that conduct is the expression of the whole man, and that his own view of nature, both in man and the universe, was a contracted one.

Zeno's psychology, with its sharp line between reason and everything else, led him to further consequences. Nothing is good, he argued, which does not tend to make a man's life good, and nothing bad which does not tend to make it evil: therefore the only good thing is good conduct, and the only bad thing is bad conduct. Conduct here does not only mean acts: for acts may be prevented by opposing circumstances: but it includes that state of the reason and will which would lead to the right act, if circumstances allowed. Stoicism takes the will for the deed, and agrees with the teaching of Christ that the man who desires a vicious act is no less guilty than the man who does it.

Everything that is neither good nor bad in this limited sense, is indifferent (ἀδιάφορον). The indifferent things are such matters as pain, pleasure, sickness, health, poverty, riches, and so forth. The effect of these indifferent things upon us is determined wholly by the judgment which we form about them. In the case of pain, for instance, what troubles you is not the pain itself but the opinion which you form about it. A favourite saying of the Stoics was βίος ὑπόληψις, "Life is all a matter of opinion". It is like Hamlet's remark that "nothing is good or bad but thinking makes it so". But the Stoic would not have used the terms "good" and "bad" as Hamlet uses them. For him things good and bad are so by nature, and their goodness and badness is a reality recognized by reason. But to everything outside this sphere man can assign whatever value he chooses. It followed that, though his circumstances were governed by unswerving laws, the Stoic could still believe that, in his inner life, he was master of his fate.

The doctrine of indifferent things brings us into the region of the Stoic paradoxes. In practice the Stoic was obliged to recognize differences of value outside the limits of good and evil. A man must be allowed to prefer sound health to sickness, and a moderate degree of prosperity to acute poverty. Zeno met this difficulty by framing a new terminology. Certain things were described as προηγγμένα, or "preferred",—first the things that belong to the mind, as memory, quick-wittedness, etc.,—next those that belong to the body, as good health, sight, hearing, etc.,—lastly such external circumstances as good parents, children, etc. The opposites of these were ἀποπροηγγμένα, or "things rejected". But the preferred things must not be desired with any emotional feeling: to the Stoic all emotions were evil, as tending to pervert the judgment.

By emotion, however, Zeno meant something slightly different from what the modern world means by the word. He defined emotions (πάθη) as "mental movements not proceeding from reason and carried to excess". According to him all such disturbances proceed from faulty judgments, and are avoidable, if a man makes the right judgment about the circumstances.

Four principal forms of emotion were distinguished, grief, fear, desire, pleasure: each of these was divided into sub-heads, as nine forms of grief, six of fear, seven of desire, four of pleasure. All these are evil. Opposed to them are three εὐπάθειαι or healthy states of feeling. Pleasure has opposed to it the healthy state (χάρα), which one naturally renders "joy"; but "satisfaction" perhaps expresses better what it meant to the Stoic: it was certainly nothing so soul-absorbing as Wordsworth's "deep power of joy". Fear was balanced by the healthy state of caution, and desire by that of will or determination. The first of the emotions, grief, has no healthy state to balance it. Happiness, for Zeno and his followers, was not a state of feeling but was defined as εὔροια βίου, or a life which flows along with a steady stream, because it is under the direction of reason and free from the disturbances of emotion.

If the Stoic definitions of virtue and happiness are accepted, one of their paradoxes, the doctrine that virtue by itself suffices to give a man happiness, ceases to be a paradox, and follows as a matter of course. It may be added here that one of the qualities most highly valued by the Stoics was ἀπροσπτωσία, or freedom from precipitate action: the worst states of a man are those in which he acts under the mastery of any sudden impulse.

Critics of the Stoic system have no difficulty in showing that their doctrine of emotion, if pressed to its legitimate consequences, becomes untenable. One of its most curious consequences was the precept, inculcated by the Stoics themselves, that the ideal Stoic, while he must give verbal consolation to a friend who is suffering from pain or a bereavement, must not himself feel sympathy. This is laid down as a fundamental point in the Enchiridion of Epictetus, who was no doubt quoting from one of the early Stoics.[1]

If we are to judge by the extracts from the early Stoics which are preserved by Cicero and Plutarch, the worst extravagances were due to Chrysippus, in whose lengthy works the doctrines of Zeno were pressed to their extreme conclusions. He is the authority quoted for the doctrine that all virtues are equal, and all vices are equal. In spite of the absurd consequences to which this doctrine leads, it can be deduced logically from the Stoic principle that virtue and vice are simply states of the will, produced by the right or wrong exercise of the reason.

Chrysippus was the author of another paradox which his critics attacked mercilessly. Zeno had defined the end or *summum bonum* as the life according to nature. But circumstances may make it impossible to accomplish this; and the end must be something attainable by the individual. Chrysippus, therefore, shifted his position, and said that the end for the individual was "to make a right choice in his selection of the things that are according to nature". His critics attacked this by pressing the analogy of the man who is aiming at a mark: clearly it is the man's object to hit the mark, and not merely to do everything which would enable him to hit it if circumstances were favourable.

It is not fair, however, to judge any system, philosophical or religious, from the paradoxes to which its followers have committed themselves. In spite of these, Zeno deserves a high place among those who have inspired men with the idea of bringing their lives under a rational rule.

(3) *Grammar and Logic.*

Something has already been said about the logical side of Zeno's teaching. Here, again, the work of the school was governed by the end in view and the psychological principles which Zeno had adopted. If the whole guidance of life and the whole effect on man of the circumstances which he has to face depend on the judgments of his reason, the wise and good man will be he whose reason has been so trained that his judgments are unerring. The Stoics maintained that it was possible to attain this certainty; and the wise man's infallibility is the best known of their paradoxes. Their standing quarrel with the later Academics on this most barren question has been mentioned above.

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[1] Ench. ch. 16. Butler points out the weakness of the Stoic position in his sermon on Compassion (Serm. V).

Holding this view, Zeno naturally differed from Plato as to the course of study which best leads to the philosophic life. In Plato's school the first steps consisted of courses in higher mathematics and mathematical astronomy. Zeno put all this aside and began with the study of grammar, followed by exercises in formal logic. Europe owes its grammar largely to the early Stoics, and, though their work fell far short of the scientific grammar and phonology of the Hindus, it was a valuable contribution to European thought. It is curious that so inventive a people as the Greeks should not have realized earlier that a systematic grammar was essential to accurate thought. Many of the difficulties of the early philosophers arose from ignorance of the simplest distinctions of grammar. If we are masters of language and not its slaves, we owe this partly to the methodical work of the Stoics.

Of Zeno's formal logic I have already said enough. It was not intended as a preparation for grappling with the problems of metaphysics, but to arm the wise man for controversy with those who assailed his system. Metaphysical questions were, as we have seen, to be left on one side. But it is not possible to lay down a dogmatic system which deals with subjects like matter, cause, free will, Providence, and the origin of evil, without being metaphysical; and Zeno's followers were as metaphysical as the authors of the Athanasian Creed. A fair notion of their controversial reasoning can be gathered from the philosophical works of Cicero. Through this channel modern writers on Natural Theology have been indebted to them for much of their material.

Zeno's weakness as a thinker is sufficiently shown by the fact that, while he makes reason the guide to right conduct, he bases the truth of science on sense-perception alone. His teaching brought with it a complete change in the ideal of the philosophic life. For Plato and Aristotle the highest type of life was that which was devoted to the investigation of truth. For the Stoic, as for the Buddhist, the ideal was one of conduct.

(4) *Parellelism between Stoicism and Buddhism.*

Though their history has been so different, these two systems resemble one another in several features. Both aim at a conduct of life which has more in common with religion than with philosophy; but it is a religion which rests on dogmatic philosophical theory. In both the aim was to eliminate completely the emotional side of human nature. Both were disfigured by the practice of systematic meditation on the grossnesses of the body, its feebleness and transitory nature. But there is much that our world might with advantage learn from both, though extensions of positive knowledge make it impossible now to adopt, without considerable adaptation, the philosophy of either.

The moral teaching of Stoicism is weakened in its appeal to the average man by its attitude of doubt on the question of the survival of the individual after death. Zeno was a Semite, who knew nothing of the thought of India, and his attitude on this question was as negative as that of the average Jew of the same period. Here the Buddhist, with his unquestioning belief in rebirth, supplemented by the doctrine that every one will in the future reap as he has sown in the past, has a real advantage. His view gives him a firm foundation for a moral system, and an object to aim at beyond the short limits of human life. A different view on that point might have led the Stoics to remove one blot from their system by modifying their teaching about suicide.

But if Buddhism has an advantage on the side of practical morals, Stoicism, with its dogmatic foundation for a belief in God and Providence, is in a stronger position on the religious side than a system which is professedly atheistic. It provides at once a rational ground for those thoughts, aspirations, and acts of devotion, which make up what we call personal religion, and which, though developed during a long course of evolution, most of us believe to have roots deep in our essential nature, and to meet with a response from the Power, whatever it is, which is that nature's ultimate source. The Stoic was not a mystic, and with regard to institutional religion was content to take part in the observances of the community to which he belonged, and allowed himself to defend practices which he must have known to be puerile. But the reflective, as distinguished from the devotional, religious spirit has seldom found a nobler expression than in the thoughts of the Emperor Marcus Antoninus, who, after the lapse of nearly five centuries, was still able to rest his beliefs on the dogmatic physics of Zeno and Cleanthes.

SOME EDUCATIONAL EXPERIMENTS.[1]

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The following Educational Experiments date back as far as nine years ago. They may not seem very original now, for much in them has since become accepted practice in Queensland, and has even been incorporated in the New Syllabus issued at the beginning of this year by the Education Department. Still, from what I have seen and heard, especially since the publication of the New Syllabus, I feel that the best of methods are not always applied with discretion and understanding.

1. *Free Discipline and Self-Government : The Classroom Republic.*—In April, 1921, I was sent to take charge of Condamine, a one-teacher school twenty miles from Miles, on the Western Railway. You will understand what ideas I then held on the subject of discipline when I say that my first act was to send for a brand new cane ; as an index to the change in my opinions when I left Condamine for Normanton, my last act was to cut the cane in pieces and throw it away among the prickly pear. I could not bear to think of my successor thrashing the children of whom I had grown so fond.

Not a few teachers have been led to study the theory of Education seriously through reading A. S. Neill. Neill's books are light, and written to sell ; his ideas are undisciplined and extravagant, but they do serve to shock some people out of their dogmatic slumber. After Neill, I got hold of Norman MacMunn's "Classroom Republic", and at once became converted. I explained to the children that henceforth they were to share in the management of the school, and once a week we should hold a school meeting for legislative purposes. A Cabinet was appointed, and portfolios allotted. The Minister for Agriculture took charge of gardening, the Minister for Works of the grounds. The Minister for Drill and Games regulated the morning assembly, and was responsible for sports material, while the Minister for Education looked after school material, and the setting and collection of written homework. One difficulty I found at once. According to MacMunn, the teacher was to renounce all authority, and trust the children to keep order in class through their own appointed leaders.

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[1] A paper read on August 4, 1930, before the Brisbane Branch of the Australasian Association of Psychology and Philosophy.

This proved difficult, for the simple reason that in a country school there are very few disciplinary problems. The children are respectful and obedient in a degree most surprising to a teacher accustomed to sophisticated city pupils. Then, too, as Sir John Adams remarks, the teacher's very stature and bulk make him the most conspicuous and imposing person in the schoolroom. Lastly, I found that the more responsibility the children assumed, the more they looked to me for advice.

The experiment continued for about three months. By the end of that time the novelty had worn off, and the Ministers had begun to find their responsibilities a burden. It must have been embarrassing, for instance, when a member rose in the school meeting, and asked the Minister for Drill and Games why the tennis-net was left out on Thursday afternoon. The Ministers had really discharged their duties loyally, and on the whole, efficiently; but now they wearied. Two or three Ministers resigned, and other children seemed reluctant to fill their places. Finally, the Cabinet appealed to me to revert to the old regime. On my advice the matter was referred to the school meeting, and the children renounced their Self-Government almost unanimously. I did not, and do not, regret the experiment, for it taught me many things. I am still convinced that it is well to give children definite responsibilities in connection with the school. It is well, too, to take the children into one's confidence and let them understand the reasons for ordinances and decisions. At the same time, I think children in the primary grades are too young to carry heavy burdens of responsibility; and a brief taste of these will make them long to be directed, and to have their decisions made for them.

2. *The Play Way in Teaching Civics.*—The brief experiment in Self-Government opened my eyes to the possibilities of the Play Way in the teaching of Civics, for I found that the elder children, through experience in the school self-government meeting, quickly acquired accurate notions of parliamentary procedure. Since then, nearly all my Civics has been taught by the Play Way. If an election is the subject, as many children as possible are assigned official positions—that of policeman being particularly popular. The electoral officials compile a roll, and the whole procedure is explained to the class. The candidates take turns to address the constituency, and to make extravagant election promises. Each member of the class votes in turn, being solemnly asked the question: "Have you voted before, either here or elsewhere, at this election?" The votes are counted in the presence of scrutineers, and the poll is declared, both candidates returning thanks to their supporters.

No one who gave the Play Way a fair trial would ever return to the formal method of teaching Civics. I said "teaching", but I should have said "cramming"; in the one case the children wearily commit to memory an array of boring details which seem unutterably remote from their experience. In the other they listen eagerly to the rules of a new game which they are about to play. Lessons in Civics which are easily dramatized are Trial by Jury, and Trial by a Magistrate; Parliamentary Debates, the Opening of Parliament, the passage of a Bill, the presentation of a Budget; a Shire Council Meeting, Election of a Hospital Committee, etc. My advice to anyone attempting this would be:

(1) Have thorough preparation made beforehand.

(2) Let the children do as much of the preparatory work as possible, *e.g.*, preparation of electoral rolls and ballot papers, manufacture of evidence for trials, etc.

(3) Be accurate in details, and take the business seriously. Personally, I object to the terms "Mock Trial", "Mock Election", for the reason that they suggest a burlesque, while what the teacher really needs is a faithful reproduction on a small scale. His purpose is more serious than mere entertainment.

3. *The Dalton Plan.*—The greatest difficulty in all one-teacher schools is that of organization. The children range from five years to fifteen, and no matter how rigorously a teacher may sacrifice the interests of the individual for those of the school, when there are thirty pupils or more, it is impossible to have less than five drafts, and difficult to have less than six. That means that each draft will receive at best only five hours of undivided attention from the teacher each week. For the other twenty hours the children must be left to work by themselves, or under the very inefficient supervision of a monitor. The most satisfactory solution of this difficulty that I have found is a modification of the Dalton Plan. As applied in schools with several teachers, the Plan calls for specialization by members of the staff, for the setting aside of separate rooms as subject laboratories, and for the complete or partial abolition of the time-table. Obviously these details must by modified when one is sole teacher, and the school has only one room eighteen feet by twenty-four. But I was encouraged to apply the Plan by the fact that, in her book, Miss Parkhurst explains that the germ of the idea came to her in a backwoods school, where she had to face the identical

problem I have mentioned above. This, then, in outline, is the scheme I finally adopted:

1. The time-table was retained, not so much for the pupils as a necessary discipline for the teacher, to make sure that attention was fairly distributed amongst different subjects and different classes. While the teacher was with a class, work in that class was as prescribed by the time-table; but when the class was due for "Silent Work", each individual might do what he pleased—within the limits of the week's assignment.
2. New work was dealt with in formal lessons by the teacher, while practice and revision work was set in weekly assignments. The assignments were written out in Class Work Books, and as there were no more than five or six children in a class, the one copy served the whole class.
3. "Extra Credits" were provided for the pupils who worked faster than the others.
4. Each child kept a record graph of his work, and the teacher kept one for the whole school.
5. Much of the set work—sums, grammar exercises, etc.—was on cards which could be passed from hand to hand.

From this it will be seen that the essential feature of the Dalton Plan was preserved, namely, that of taking the pupil into one's confidence, of letting him see the work mapped out for a definite period, and of putting on the pupil some responsibility for getting that work done.

The children responded warmly. At first I tried the scheme with the two upper classes, Fourth and Fifth, and I was then encouraged to apply it to the Third. I did not attempt to apply it to the younger children. With the older pupils, the Plan was undoubtedly successful. It is certainly easier to be interested in your work when you know exactly where you are going, and what you aim to do. Yet I found the Plan not entirely without defects. Only once did I encounter deliberate deceit—the case of a child who marked off on her card assignments she had not done; that was in the Third Class, where children are still very young for responsibility; but I did find a tendency to scamp the work, and to keep up the standard it was necessary to correct much of the assigned work in person. I need hardly say this was a very heavy task, especially as it all had to be done out of school hours. When I was transferred to Normanton, with more pupils and bigger classes, I found a fresh difficulty. If the work is set out fully, as Miss Parkhurst recommends, it is out of the question for the children to waste time copying their assignments from dictation. I used to employ the typewriter, making five carbon copies at each typing—but this was very laborious. Although I had a stencil duplicator, to use this for assignments would have been too expensive. As I had only three classes at Normanton—having an assistant for the other three—I reduced the quantity of work set in the assignments, and did more in class-work. Apart from these difficulties, however—which are not insuperable—I am convinced that the central idea of the Dalton Plan is a most valuable contribution to teaching method.

4. *The Free Period.*—A device which has about it something of the Dalton spirit, which I adopted about the same time, is the Free Period. This is a half-hour specially set aside on the time-table, in which the children may do any work that they choose. I soon found it advisable to require that an exercise book be kept by each pupil specially for this Free Period work—and to insist on the work being well done. Drawing was from the very first the favourite occupation, but coloured maps, essays, stories, and transcribed poems helped to fill the books. When the District Inspector saw the Free Period marked on my time-table, he did not appear at all enthusiastic, but an inspection of the Free Period books convinced him that the time was not being wasted.

After a few months the children began to tire somewhat, and to protest that they " did not know what to do in their Free Period books ". It was just at this time that I received a valuable suggestion from a Training College student—that was the use of Free Period Cards. Sheets of cardboard, some white, some coloured, were cut, and on them were mounted coloured illustrations cut from the *Saturday Evening Post* and *The Ladies' Home Journal*. Then, in indian ink on the white cards, or white ink on the coloured cards, exercises were written to suit each class. The subject-matter of the exercise was related to the illustration, and the exercises covered Arithmetic, Composition, Grammar, History, Geography, Hygiene, Morals, Writing, and Drawing. These cards proved very popular, and the next District Inspector characterized them as " a most artistic and useful collection ".

5. One of the subjects prescribed for senior pupils is Current Events. I must confess that before I had my own school I had always taught these lessons in a very perfunctory way. My interest in Current Events as a school subject was enormously increased when first I became aware that the subject could be used in correlation with Geography in such a way as to make the study of Geography a matter of intense and living interest. It became my practice to require every

pupil in Classes III, IV and V to bring a newspaper cutting once a week. These were put on my table, and checked by a monitor. Then I would select the most suitable as material for the lesson, and after the lesson they were pasted in a scrap book, each being labelled with the name of the pupil who brought it. This provided an incentive to select paragraphs with care, and it worked well.

During the lesson the map of the world was on the blackboard, and every pupil had his atlas in hand. Whenever the name of a geographical feature occurred in the cables, we located the place, and noted reasons for its importance. I kept a record of such places, and announced that at the end of the month a question on these places would be given in the monthly examination. The result was gratifying. Even in Class III the pupils began to have an idea of the position and importance of such places as Rome, Chicago, and Singapore, while interest in the regular geography lessons was quickened. Later we began to use the Class Scrap Books for newspaper pictures relating to current events or geography. Rivalry between classes was keen, and the scrap books became a useful teaching aid.

Time will not permit me to say much of another geographical device, the ground relief map. This was made in the front garden, the coastline of Australia being outlined with stones, and the earth banked up inside. Stones in rows stood for mountain ranges, with whitewashed ones for the Australian Alps. The rivers were outlined in spent carbide. I have since seen concrete relief maps laid down in school grounds, but I am convinced that the map the children have made for themselves possesses far more educational value.

6. *The Project Method.*—The Project Method is one with which I have done no more than dabble, but it may be worth while to mention a Nature Study Project we carried out—that of investigating the native grasses in the locality. We decided to hold an exhibition of the best collections. In my ignorance I expected to find perhaps twenty or thirty varieties, but we found altogether nearly two hundred. I obtained the list of native grasses from the Department of Agriculture, but this proved of small value, for it gave only technical names. So, apart from the grasses we all knew, such as Mitchell grass, and the numerous sub-species of three-awned spear-grass, we invented names as we needed them, "Fuzzy-wuzzy grass", "Alice Smith's grass", and so on. At the end of the month we held an exhibition. The schoolroom was cleared, and the exhibitors allowed half an hour to set up their collections, most of which had been arranged very tastefully on sheets of cardboard. Then the Editor of the School Magazine made a speech, declaring the school show open, and the judging

was done by a committee of non-competitors. Certificates of merit were awarded to the owners of the best collections. The children were delighted with the project. How much they learned by it I cannot be sure, but I do know that it taught me a great deal about native grasses.

7. *Number Games.*—So far I have not mentioned Caldwell Cook, though it will be obvious that the methods I have been outlining are in the spirit of his wonderful work, "The Play Way". Before discussing his greatest contribution to modern school method, I shall mention a device I owe to a New South Wales disciple of Caldwell Cook a gentleman named Kearns. This is a number game designed to lighten the drudgery of learning the multiplication table. A smooth board about twelve inches square is required, into which tacks are driven in three vertical columns. Tickets are prepared, bearing suitable numbers, and arranged in sets for the different multiplication tables. The tickets are distributed to the children, and each in turn puts his ticket on the right tack, so building up the table. At first the tickets are put on in order—seven ones are seven, seven twos are fourteen, and so on; but later the tickets are put on in any order, so that the children are thoroughly drilled in the different number combinations.

I found this number game so satisfactory that I devised a similar one for weights and measure tables. A pack of cards was prepared, each card bearing a question, such as "How many panels of fencing make a chain?", and under that, the answer. The cards were dealt by one of the children, and then the dealer began the game by asking his right-hand neighbour the question on the top card of his hand. If the neighbour answered correctly, the card was thrown into the centre, and he asked his right-hand neighbour *his* top question, and so on. Should a boy fail to answer the question correctly, he was politely presented with the card bearing it. The first player to lose all his cards won, but play continued till one child was left in, and he was "booby". It is obvious that he who answered all questions correctly would win, and he who failed in most would be left till last, and would have most practice with his tables. One fact I did discover about all number games was this, that it was best not to work any game to death. It was best, at the first sign of boredom, to change the game at once, and to let the game be looked upon as a treat rather than as a thinly disguised task.

8. "*Littleman Lectures.*"—The next method is one I have referred to as Caldwell Cook's greatest contribution to school methods—I mean the "Littleman Lectures". These are now recommended in the New Syllabus, but I am sorry to say that some teachers do not appear to appreciate the spirit of the

method. As detailed by the originator, the essence of the scheme is the encouragement of spontaneity and originality. The pupils elect their own president, secretary and committee. The committee is responsible for organizing a programme of lecturettes each week, and the lecturettes are all by volunteers. It is important that the child should be free to choose his own subject. The weakness of oral composition lessons has hitherto been that the child was set a subject in which he had little or no interest, and was seldom allowed time for preparation. How many of my hearers would be prepared to come up on this platform and give an extempore address on " Symbolism in Ancient Art " or " The Influence of the Planet Jupiter on Solar Radiations " ? When a child is encouraged to volunteer and allowed to choose his own subject, and also given a week to prepare his address, he will often surprise you. For the boy who is quite tongue-tied in school, and ignorant of book-learning, often knows more than his teacher about the cattle industry, and will be amazingly fluent in an address on the mysteries of mustering and camp-drafting. With many methods I have found it necessary to adapt and amend, but the " Littleman Lectures " I managed exactly as recommended by Caldwell Cook. His method of correction and valuation is so ingenious and effective that it could not be improved.

The results of the Littleman Lecture method of teaching oral composition were altogether pleasing. I found that written composition improved immediately and immensely. Best of all, the diffident pupils gained in confidence and self-possession. I was much encouraged by an incident which occurred in connection with a concert I had organized for the Country Women's Association. The ladies wished somebody to make an address to the audience, urging the women who were present to join the Association. None of their members would speak, and they wished me to do so ; but I protested that it was not fitting for a man to make such an address. Finally, I told them I would find a speaker, and I did. One of my pupils, a girl of eleven, undertook the task. She prepared her speech without assistance, and, on the night of the concert, came on the platform with perfect self-possession. She urged the women to join the Association, for they would have the use of rest homes at the seaside ; and the men, said she, should allow their wives to join, " for look at the good times they will have while their wives are away ".

9. *The School Magazine.*—Next to the Littleman Lectures, the most valuable aid in the cultivation of ease and confidence in self-expression is the School Magazine. At Condamine we had a manuscript magazine, prepared in scrap-book fashion. When I left for the North I prepared for a more ambitious

attempt by the purchase of a stencil duplicator. At the Normanton School I initiated *The Great Gulf Gazette*, which was published monthly until I left there. This had from five to seven foolscap pages, with sections devoted to Social News, Town Topics, Sports, besides stories and articles, and occasional poems. Even the babies contributed; for example, we would publish an article on "The Watermelon", written by Class IB. Each child would contribute a sentence, and each sentence would be published with its author's name attached.

All the matter published was original, and we enjoyed a circulation even outside the school. Some of the boys displayed remarkable energy as town reporters, and when it was rumoured that Kingsford Smith intended making Normanton his first port of call in Australia, we arranged for an attempt to interview him. In this our budding journalists were disappointed. I can thoroughly recommend such a magazine to any Head Teacher who wishes to encourage initiative and self-expression. The cost is not excessive, especially if the teacher already has a typewriter. The knack of cutting stencils is easily acquired, and the rolling off of the copies may be done by the older boys.

10. *Intelligence Tests.*—No account of Educational Experiments would be complete without some reference to Intelligence Tests. At Condamine, besides giving group tests, I tested about fifteen children with the Stanford revision of the Binet scale. The results were interesting, when compared with the children's school records; but the fact which impressed itself upon me was the unsuitability of the scale as it stood for testing country children. Both Binet and Terman regard a knowledge of current coinage as something a normal child would acquire apart from school experience; but in the country much business is done by mail order, and cheques are used very freely. I have seen a country boy write a cheque for five shillings to pay his way into a dance. There are many children in Queensland, by no means unintelligent, who hardly know current coins by sight. In Normanton I found this unsuitability of the tests even more pronounced. All the children there tested low on the Binet scale—some very low; and I am satisfied that this was due to the fact that, quite unintentionally, the various tests do place undue emphasis on book-learning. For among the boys tested were some of whose bushcraft, self-reliance, and resource I had positive knowledge. For these subjects a scale is needed which will deal with such matters as finding your way in strange country, on a cloudy day, without a compass; choosing the best spot to swim your horse over a flooded river; and making emergency repairs to a car, without proper tools, when you are a hundred miles from anywhere.

Another difficulty I met with was that of parental opposition. When I began testing in Condamine, the rumour went round that I was picking stupid ones to go to Goodna. One of the more intelligent of my committee-men protested that when I found a child was somewhat deficient, I would be likely to give that child less attention, and to concentrate on teaching the smart ones—which is, of course, nearly the reverse of the truth. The same difficulty occurred when I adopted the Jones system of teaching reading. This method, invented by a New South Wales teacher, makes use of a simple system of diacritic marks, taught by an ingenious drill called " handplay ". The system itself was effective, but I found that the parents objected, for hitherto they had been accustomed to hear their children read at home, and they could not, or would not, understand the system of diacritic marks. For this reason I abandoned the Jones system. A young teacher may feel tempted to assume an air of superior knowledge, and to despise the ignorant prejudices of parents, but this attitude is neither wise nor profitable. Much of the efficiency of school work depends on securing parental co-operation, and it is worth while making some sacrifices and exercising considerable forbearance to retain the confidence and good will of the fathers and mothers of our pupils.

11. *Charts and Posters.*—A form of teaching aid that is very popular is the cardboard or manilla chart. These charts are oft-times needlessly elaborate. We have it on the authority of our Director that the best teaching aid is a well-used blackboard, and Sir John Adams has remarked, in " Exposition and Illustration in Teaching ", that the educational value of a teaching aid is often in *inverse* ratio to the trouble taken in its preparation. We may admit all this, and yet, because blackboard space is necessarily limited, and we wish to preserve a diagram for future use, we may find it convenient to prepare this as a chart. Personally, I have made and used many charts, but looking back I must admit that I wonder now whether the charts did not become an end in themselves. I know I did enjoy making them. I had a set of historical charts in Normanton, one for the Tudors, one for the Stuarts, and three for the period since. A vertical ribbon, coloured variously for different sovereigns, marked the reigns. Heavy horizontal bars marked the centuries. Red vertical ribbons stood for wars, with red arrows for battles. Movements like the Renaissance or the Industrial Revolution were shown by a green vertical ribbon. Finally, the lives of prominent men were shown by narrow vertical bars. For actual teaching I found these charts very useful, but I also hung them on the walls, hoping the children would examine them at other times.

In this I was partly disappointed. In the light of my experience I would advise others that:

(1) Charts should be bold and arresting in design.
(2) They should not contain overmuch detail.
(3) Wherever possible, they should be made by the children themselves, under the direction of the teacher if need be.

Related to the chart, but yet distinct, is a teaching aid that is popular in American schools, namely, the Poster. A week is set aside for a " drive " in some special direction, *e.g.*, a Good Health Week, or a Safety-First Week. The children are encouraged to make coloured posters, decorated with an appropriate design, and bearing a suitable " slogan ". These posters are submitted to a committee of judges, and the best of them are hung in the school. This is a method I have tried only once, in the form of a Good English Week. I bought some coloured cardboard and made a sample poster. The background was green, and the legend, cut out in letters of red card, said: DON'T BE A   , and under this appeared, also cut out in red, a long-eared donkey. Beneath this, in white ink, was the further advice: " Say ' I saw ', *not* ' I seen '." This was shown to the children, they were provided with a list of common errors in speech, and the necessary materials. I believe that much could be made of such posters, but before I did anything further, I was called away from Normanton to fresh fields of endeavour.

12. *Writing Scales.*—The last experiment I shall mention was in the use of writing scales. Such scales have been constructed and standardized with great labour, for the purpose of providing a uniform standard of comparison throughout one state or country. There is value in a writing scale, however, though standardized merely in the one school. Such a scale is made very, very simply. The children are set an easy headline, such as " Mary had a little lamb ", and set to write it over and over again for two minutes. They are told beforehand that they will be judged both for speed and for legibility. When the two minutes are up, they are stopped, and the number of letters written is counted, and then divided by two. This gives the score for speed. The papers are then spread out on the desks, and a judging committee arranges them in order of merit. This is easier to do than might be expected. An arbitrary value is then assigned to the highest and to the lowest—say 90 and 40, and other papers are then picked out at equal intervals to represent 50, 60, 70 and 80. A strip of three lines is then cut from each of these papers, and the strips are pasted in order on a piece of cardboard, and hung on the

wall. This provides an objective scale by which any sample of handwriting can readily be valued. In practice it proves to be advantageous to allow a pupil to measure his own writing for legibility by means of the scale. Marks in a copy book or exercise arbitrarily valued by the teacher are never so convincing as marks assigned from an objective scale. A pupil who writes badly is thus given a direct incentive to improve his writing. It is profitable to give a writing test from time to time to the whole class or the whole school, and to value both legibility and speed. One surprising result of such tests is that, almost invariably, the good writers are found to be also the rapid writers, which is not what most of us would expect. I tried this both in Condamine and Normanton, and should I ever take charge again of a primary school, I should certainly construct a writing scale, or a series of them, for the school.

This paper may have seemed somewhat incoherent and disjointed, yet I trust that it will not be found entirely lacking in unity. The methods and devices I have described are miscellaneous enough, but I think it will be evident that they have certain basic principles in common. Freedom, the encouragement of spontaneity and self-activity, respect for the child's individuality, and the principle that Sir John Adams has named Paidocentricism—all these I have endeavoured to realize in a practical way. As philosophers it is fitting that we should well consider general principles; but as educationists it behoves us to seek particular methods of giving those principles concrete expression. The results of my seeking I offer to you for what they are worth. If in my exposition I have been unduly dogmatic, I ask your pardon, and would have you regard my judgments as subject to correction by those whose experience is wider and whose knowledge is deeper than mine.

RESEARCHES AND REPORTS.

I.

SENSE OF EQUILIBRIUM.

Communicated by PROFESSOR T. A. HUNTER.

The following account of the experiences of an injured soldier may be of interest to the readers of the Journal.

ON or about the 19th of May, I was with the New Zealand Expeditionary Forces at Gallipoli. During the day, I was called to assist an Indian mountain-battery officer in finding the range and elevation of an enemy aeroplane. Standing with the officer to manipulate the clinometer, I was taking the range with the Bar and Stroude range finder. Owing to the altitude of the aeroplane, my head was tilted back in an effort to focus the plane when I was struck by shrapnel-shell fragments. I have no recollection of the actual blow, but apparently soon after receiving it I regained consciousness for, although I could see nothing material about me, I can remember a voice saying: " Take care that the disk does not fall on his head ". I then felt as if I were falling into space, just falling and falling in a backward somersault, over and down, over and down, until I lost all sense of living at all. I have since learned from my comrades that I was shipped from Anzac to Alexandria and thence to Malta, the removal taking about fourteen days.

At some time in this period I must have " come to " partly, for I can remember very distinctly a picture of a ship's deck covered with rows of men rolled up in blankets. It was plain to me that I was on a ship, for I could see the side of the hatch and part of the mast and ropes. I did not have the inclination to sit up, and I cannot remember any feeling of having a body or limbs attached to my thinking. Then again, with a great fear, I seemed to start falling in backward somersaults, until even this fearful sensation disappeared into nothingness.

Later, I completely regained my senses to find that I was lying in a bed in the Valetta Hospital at Malta. I lay for some time taking in the scene—a hospital ward, a nurse or two moving about quietly and soldiers in uniform doing orderly work. The number of soldiers puzzled me, for, although I did not realize it at the time, I had completely lost all memory of the war. I thought that I must be in the Napier Hospital in New Zealand, since I could remember that I had been working at the top of a concrete tower adjusting the rollers for the cables of a suspension bridge then being erected in Hawkes Bay. As I lay there I felt very comfortable, and had no inclination to sit up and take stock of my surroundings. After what seemed hours, a nurse came and spoke to me. I inquired of her where I was and what had happened. She apparently tried to tell me, but all I could gather from what she said was a confusion of words and phrases about wounds, ships, war, Germany, France, Egypt, etc.

I continued in this state for some time; I do not know how long. All day I would try to straighten out this tangle of thought, but it ended in the feeling of being struck on the head with a book, and the sensation of falling would begin again. I can liken this period only to a state of coma, or to the state of feeling half-awake that one has in the early hours of the morning when one might hear if spoken to but would not be sufficiently awake to think of getting up. During this time I slowly regained my memory, and could piece the whole together sufficiently to recollect the happenings since leaving the bridge-building to enlist in the army. I could now move and control my right hand, but while I could feel that my left hand, the left side of my body and my left leg were there, I could not control them in any way at all. They might have been so much rubber for all that I could do with them.

After a time I was shipped to England, landed at Devonport and conveyed to the military hospital. In the course of this journey I was lowered from the quay at Valetta on to a pontoon, taken out to the ship's side, hoisted up on to the ship by means of the crane and lowered into the ship's hold, now used as a hospital ward. I could see by the objects passing my line of vision that I was being raised or lowered as the case might be, but I could sense no feeling at all of going up or down. I have had a similar experience when sitting in a stationary train, watching another train pass out of a station; I was not sure which of the two trains was really moving, or even if both trains were moving or not.

The paralysis of the body and limbs gradually disappeared until I could move about and sit up with a little support to my back. I was later moved to the Australian Auxiliary Hospital in Middlesex, there being no N.Z. hospital at Walton-on-Thames at that time. When I was able to sit up in bed and see the men in various stages of convalescence playing about on the lawns, I expressed the wish to go out among them, for I did not then know that I would not be able to walk. The wound on my head had healed up most satisfactorily, leaving very little disfigurement, but, of course, I was still very weak from lying in bed so long. I had by now reached a stage where, as long as I kept my head still, everything was steady and normal, but if I turned my head from right to left, or *vice versa*, the buildings and other visible objects would appear to continue moving round in the opposite direction. This brought on extreme giddiness without any feeling of sickness. To right this, I would shut my eyes for a few minutes and would feel as if spinning slowly over backwards until I opened my eyes to find everything steady again; or if not, I would again feel as if struck on the head with a book, and would awake later feeling a little more than frightened of a repetition of this banging sensation. Some time later I was allowed to go out in a wheel chair on to the lawn. As I could not guide this chair, much amusement was caused by my efforts, for each time I turned, the whole country-side would appear to turn in the opposite direction. This feeling steadily became less and I asked permission to be allowed to walk with the aid of a stick, as I had also been wounded in the right hip and behind the left knee. Being told that I must not yet attempt to walk, I remained with my chair as a means of locomotion. Early in the next month several London doctors came to examine me. After much feeling round my ear and forehead, especially behind my ear, these doctors stood back on the lawn about ten yards from me, and, with an orderly on each side of me, I was told to walk towards them. I really thought that I could walk, and often wondered why I was not permitted to do so. However, I was soon to learn the reason. I stood up, at first a little weak on my legs, and started off towards them. I received a great shock; the earth seemed to tip up on edge, so to speak. The doctors, trees and buildings simply shot over my head and I could only cling desperately to the grass, surprised that it held against my weight. I seemed as if falling down and down backwards, taking the earth with me, until, after shutting my eyes, I opened them to find myself sitting on the lawn, with the same doctors standing over me. I was taken back to bed and slept soundly till the next morning. The doctors explained that the balancing organ in my ear had been injured. To my query how long I would be like this, the doctors replied that the defect might be righted in time or it might be permanent. They decided to leave it for a few weeks and, if there were no improvement, to operate. I resigned myself to the wheel chair for some time, determined to make the best of things as they were. I thought a good deal about my condition during the next few days and hit upon the idea of trying to maintain my balance by some external means. I took the height from my shoulder to my feet and a stick of light wood from my shoulder to a point six feet in front of my feet. A fixed angle was made at my shoulder by a short piece of wood nailed to the stick and when this piece of wood was kept pressed on to my chest the point of the stick just made contact with the ground. This contrivance served very well so long as I remained on level ground; but I was able to extend my walks and venture up and down grades by making allowances for the position of fences, trees and buildings. In doing this, messages from feet and eyes assisted considerably, for I could not stand erect with my eyes closed. As time went on, I found I could do more and more without the aid of the stick, and after another operation I was able to leave the hospital and go on furlough.

The sensations of giddiness would come to me more or less at intervals, most noticeably when I was over-tired. It is thirteen years since I was wounded, and the only inconvenience I now suffer is that I am not able to maintain an upright position in extreme darkness or with my eyes shut. On a recent occasion, I noticed this difficulty when I climbed to the top of a twenty-foot windmill tower to oil the mechanism. As there were no trees or buildings in the immediate vicinity, the tower seemed to me to sway about like a stick of flexible rubber, instead of being rigid as it really was.

II.

AN INVESTIGATION OF RETENTION USING THE METHODS OF RECALL AND RECOGNITION.[1]

By H. F. BENNING, B.A.,
Psychological Laboratory, University of Sydney.

THE aim of the experiment was (*a*) to compare the curves of forgetting obtained by the methods of recall and recognition using in each case similar sets of material, *viz.*, (i) nonsense syllables, (ii) digit series on a sufficiently large number of subjects over suitable periods of time to give reliable results; (*b*) to investigate the effects of retention on (i) intelligence or general ability and (ii) on success in school examinations.

Ebbinghaus,(1) 1879, was the first to investigate the memory processes. He introduced the use of the nonsense syllable and established the "curve of forgetting" by the direct method. No serious changes have as yet been made in his initial statement of the properties of this curve.

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[1] The writer desires to tender his thanks to Dr. A. H. Martin who suggested and supervised the work, and to the members of the teaching staffs of the schools visited for their valuable co-operation which ensured the success of the tests.

Numerous workers from Wolfe in 1886, including Baldwin,(2) McDougall,(3) Achilles,(4) McGeott and Whitely,(5) have been busy in the field of memory work, but, as far as the writer knows, this is the first attempt to investigate the problem as stated above.

PROCEDURE.

Four lists of fifteen items each were prepared—two of nonsense syllables and two of digits. These were printed on white cardboard sheets, 7 inches by 5 inches. Each of the fifteen items in a series was exposed ten times at the rate of two seconds a card, thus eliminating the "overlearning" factor. For all tests the instructions were identical, explaining the nature of the test with emphasis on the fact that the lists were to be "learned with a view to reproduction at another time". The amount forgotten by each subject was measured at intervals of one hour, twenty-four hours, forty-eight hours, one week, two weeks, and three weeks, each examination after the first hour being conducted at 10 a.m.

For data involving the "recall" method each subject was required to write on a sheet of paper as many of the nonsense syllables or digits of the lists as he was able to remember. These lists were corrected by scoring exact reproduction only as correct.

On the other hand, for the "recognition" data new sets of fifteen syllables and digits were learned, and in the tests the learned material to be recognized was presented on a printed slip with an equal number of "disguise" syllables or digits respectively. The testing took place at the intervals mentioned before, the subject being required to identify the learned material by marking "Yes" and the disguise material with "No". No guessing was allowed. Three different arrangements of the lists containing the learned and disguise material were used at various intervals. For scoring in the recognition work Woodworth's formula(6) was used, *viz:*

Recognition Score = Total Number − 2 times errors − omissions.

The experiment was carried out on pupils of various State High Schools whose average age was fourteen to sixteen years. Each subject was given an Army Alpha Test(7) and his place in the half-yearly examinations noted. These results were correlated with "immediate" memory scores and the total scores over the full period of the test. The curves obtained represent the results got from sixty-one subjects (nonsense syllables) and fifty-one subjects (digit series).

RESULTS.

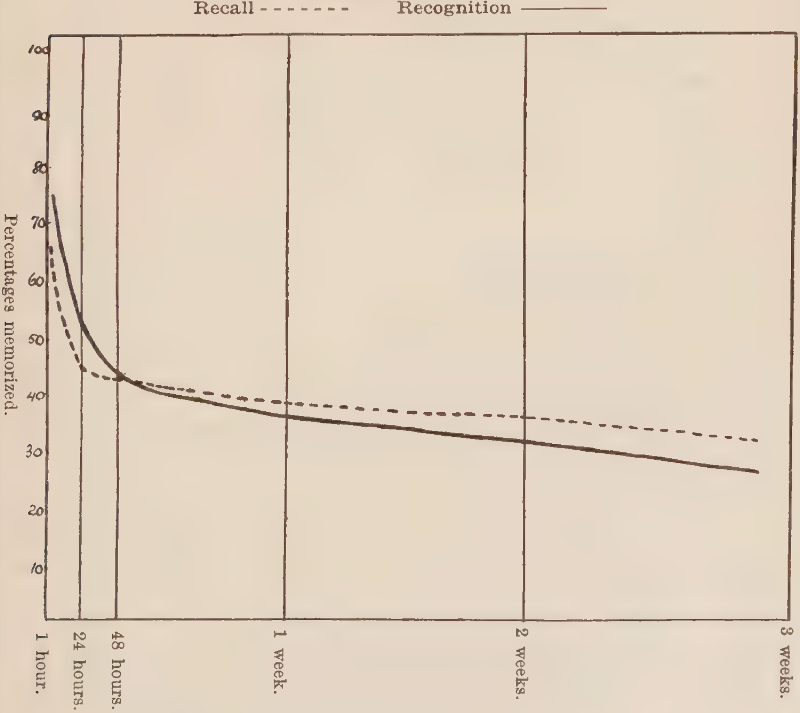
There is a definite similarity but not coincidence in the shape of the curves of forgetting as determined by the methods of "recall" and "recognition". The percentage of learned material forgotten is greatest during the first forty-eight hours and then gradually decreases towards a constant as time goes on.

The main differences in the two curves are: (*a*) In the "recognition" curve the percentage remembered immediately after learning and the percentage remembered after twenty-four hours is much greater than the percentages for "recall" over the same periods; (*b*) the percentage of correct responses after a period of one week or more is in favour of the "recall" method.

This last result is contrary to many theoretical opinions, and before being definite about it several facts must be considered. The scoring in the recognition tests involved two pieces of memory work: (*a*) Recognition of the learned

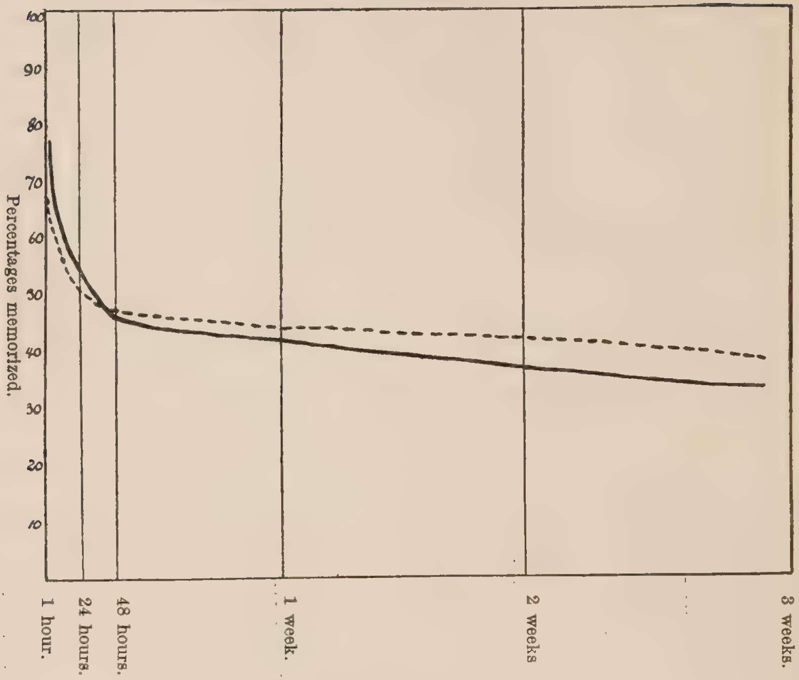
GRAPH I.

Curve of Forgetting. Nonsense Syllables.



GRAPH II

Curve of Forgetting. Digit Series.
Recall ------- Recognition ———



material, and (*b*) recognition of unlearned material. This makes for higher possibility of error. Again, the value of the re-learning factor should be considered especially in regard to the effort required, *viz.*, Are the association links strengthened equally by correct recall and correct recognition? I think that the "recall" associative links would be stronger.

The two sets of curves obtained by using the nonsense syllables and the digit series show close correspondence, thus indicating the value of the results.

The results show that when the material and method of the experiment are of the type used in this experiment, that the greater efficiency of recognition over recall is only true over short intervals.

The correlation of the scores obtained from the "recall" and recognition methods used on the same subjects shows a positive correlation of 0·31. This result throws some light on the operations of the processes involved, for if they were identical one would expect much higher correlations.

There is a small positive correlation between the memory scores for recognition and recall and school examination results as compared with the practically non-existent correlation of the same scores with the Army Alpha results.

TABLE OF CORRELATIONS.

Correlations with			Army Alpha.	School Exam.
Recall ..	Nonsense Syllables ..	Total Score	0·03	0·43
	Digit Series	Total Score	0·17	0·48
Recognition	Nonsense Syllables ..	Total Score	0·1	0·30
	Digit Series	Total Score	0·14	0·42

CONCLUSIONS.

I. (*a*) The "recall" method is superior over extended periods to the "recognition" method in the degree of retentiveness.

(*b*) The "recognition" method is superior for periods under forty-eight hours.

II. Rote memory is not an obvious factor in general intelligence or general ability.

III. Retentiveness appears to operate as a specific factor in success in school examinations.

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REVIEWS.

THE DAWN OF MODERN THOUGHT: DESCARTES, SPINOZA, LEIBNIZ. By S. H. Mellone. Introductory Note by W. D. Ross. Oxford University Press, London: Humphrey Milford. 1930. Pp. 124. Price in Great Britain: 4s. 6d. net.

Dr. Mellone has in this little work conferred a boon upon students of philosophy, whether they be private amateurs of the pursuit or students at the universities, and no less upon the teachers of these students. The period with which he deals, the seventeenth century, which he cites as "the century of genius", reached its philosophical acme in the great succession of rationalistic thinkers whose systems, as well as the ideas of some of their more important followers respectively, are passed in review in Dr. Mellone's pages. Up to now, nevertheless, there has been no elementary handbook in the English language which one could recommend to beginners in the history of philosophy, presenting in compact form the tenets of this most fascinating school considered as a unity, in any way comparable to the many clear and competent expositions of the English empiricists—so-called—or even of the Kantian philosophy. Yet the unique directness of the intellectual affiliations of these three thinkers, each to his successor or predecessor, in no way obscured by the diversity of their spiritual antecedents, the equal directness of their reference to the contemporary fashoining of the foundations of the modern scientific outlook, and the unparalleled stimulus to philosophical reflection which the method and the character of the intellectual enterprise undertaken by this school affords to all modern men with rational interests, constitute the justification and indeed the urgency of the task which the author has attempted to perform. I say the urgency, for in the existing conditions of university instruction there is today a grave danger that the irreplaceable value of the study of philosophy "by periods" may be lost. More and more these conditions are threatening to drive us back upon expedients like those hyphenated American courses in "Introduction to Philosophy" whose plausible claims of concentration upon the "evolution of thought" and what not are frustrated from the outset by lack of the very thing for which they are proposed as a substitute, namely, a competent historical acquaintance with the actual doctrines of the philosophers concerned, without which the "evolution" refuses to march. Yet if there is one period whose study could justify the whole "period" method, it is just that on which Dr. Mellone has now, perhaps in the nick of time, written the missing text-book. As to his performance of the task, it is possible to accord his achievement unstinted praise. By making the utmost use of his limited space he turns the limitation into an outstanding merit. In this book there is no "padding" at all. The outlines of the doctrines of the three leading figures are amazingly complete; use has been made of the results of the most recent scholarly research; yet the exposition proceeds with an effect of naturalness and simplicity, almost of inevitability, which comes from a clear initial definition of the problem to which each thinker addressed himself. At the same time, it should be remarked that the tendency is always to stimulate thought, never to lull it to repose. Especially noteworthy, perhaps, are the revelation as a single concentrated force of the thought of Spinoza, and again the success with which Dr. Mellone has brought out for the general reader the elements of vital human import in the system of such a "philosopher's philosopher" as Leibniz. The book should be equally valuable as introductory reading for the student and, after he has pursued the studies to which the adequate and up-to-date bibliography is a faithful guide, as a means of realizing what he has learnt. I have mentioned the long want of such a work, but it should be said that the systematic presentation it gives of the ideas of the great

Rationalists could only have been made in the light of those present-day movements in scientific thought which have enabled us to sum up and evaluate in their fruitfulness and in their limitations the precise assumptions of the older position. Of his appreciation of these developments Dr. Mellone makes us sufficiently aware. The author is to be heartily congratulated on having achieved this peak in the expository range of his philosophical accomplishments.

W. ANDERSON.

RATIONAL ORGANISATION AND INDUSTRIAL RELATIONS—A SYMPOSIUM OF VIEWS FROM MANAGEMENT, LABOUR AND THE SOCIAL SCIENCES. International Industrial Relations Association, Java St. 66, The Hague, Holland.

This work, which is the result of the 1929 discussion meeting of the International Industrial Relations Association, comes at an appropriate time. The great problems of present-day industry in Australia, as well as in all other countries of the world, are those of scientific organization or rationalization; and the subject of industrial relations offers the major problem of rationalization. We, in Australia, although we suffer relatively slight loss through strikes and lock-outs compared with other countries of the world, recognize that co-operation between employers and employees which comes from peaceful relations in industry is an essential feature of industrial reconstruction. The publication under review presents for consideration not only this major problem, but the many minor factors which a successful policy of rationalization will need to take into account.

Following an introductory paper by M. L. Fleddérus on " Groups as Fundamental Factors in Industrial Relations ", Major L. Urwick presents an article on " Rational Organisation ", a subject on which the author is eminently fitted to write. This contains a concise and illuminating discussion of what rationalization is, what its adherents hope from it and the way in which they expect their hopes to be realized. Major Urwick tells us that " A scientifically organized industry is a group of enterprises engaged in supplying similar or allied requirements to the community by methods involving the minimum waste of either effort or material ", and stresses the fact that " Our economic machinery exists not to enrich individuals—that is incidental—but to serve the community ".

This is rationalization's counsel of perfection. We are not surprised after reading such words as these to be told that rationalization can only be the result of a " mental revolution ". It will be possible only after we have come to understand fully the highly complex system which is modern industry, and have learned to " direct it deliberately and definitely for the common good ". Nor will it be possible to develop a completely rationalized industrial system until " human beings . . . are prepared themselves to be completely rational ".

If this is the essential precursor of rationalization, if it can be applied only by purely rational beings, it would seem that the hopes of its protagonists are foredoomed to disappointment. But it seems to me that Major Urwick is demanding an unnecessarily high standard of human behaviour. We will all agree that rationalization demands a " mental revolution " comparable perhaps to that which would be essential for the introduction of pure communism. But the revolution will need to be nothing more than a change in outlook. Our industrial leaders, and their followers, will need to change their incentives and work towards the good of all, as well as towards their own self-interest. This is quite different from the demand that human beings should become " completely rational ". Individual and social interests are not of necessity incompatible, and to this extent rationalization, as Major Urwick understands it, is not impossible of realization.

The author realizes that his subject is far too wide to be treated adequately in the few pages at his disposal, but he finds space to give us an excellent *résumé* of the position, under a rationalized industrial system, of labour and management. Major Urwick would not hesitate to recommend some form of control by all the workers in industry, if such a step were ultimately essential to the avoidance of waste and the general efficiency of industry. But he recognizes the dangers to which any such scheme may lead unless it is carefully planned and scientifically administered. "The object of economic activity", he says, "is production of goods and services at minimum cost to the community, not production of debating societies at the community's expense."

Capital and finance generally, the shareholders of companies in relation to the control of enterprises, trustification and the essential need for publicity all receive treatment, and an admirable discussion concludes with an analysis of what the author considers to be "the central issue of rationalization, *the adjustment of supply to potential demand*." It is this factor which is ultimately to provide the consumer with great benefits.

The third paper is by Dr. H. M. Vernon, of the Industrial Fatigue Research Board, London, and deals with "The Determination of the Optimum Hours of Work". Contained in the book, in addition to those mentioned, are articles by Erich Lübbe, President of one of Germany's many Works Councils, on "The Job and Its Conditions"; by C. H. Northcott, Labour Manager of Messrs. Rowntree & Co., Ltd., on "Personnel, Policy and Procedure", with an addendum by Thyra Smith, Assistant Psychologist at Rowntree's works, on "Selection, Training and Promotion of Employees"; by H. Dubreuil, Secretary of the General Confederation of Labour, Paris, on "Industry—A Science and an Art"; and several other articles together with supplementary memoranda of an interesting nature on similar problems.

Students of economics and industrial psychology will do well to study the material presented in this symposium, not only because of its absorbing interest, but because the divergent views expressed provide an excellent indication of the opinions of all industrial classes on the important subjects round which the discussion centres.

R. B. MADGWICK.

RELIGION IN THE LIFE OF THE NATION. Four Lectures by E. H. Burgmann, M.A., Th.Soc. (The S. John's College Press, Morpeth.) 1930. Pp. 44. Price: 1s.

This little book comprises four lectures delivered at the Melbourne University Christian Union Conference, at Healesville, in May, 1930. They are addressed "primarily to young folk who are seeking for some general principles which will enable them to get some sort of order into their thinking".

The author begins by tracing the process by which the later Hebrew prophets changed the concept of God from that of a tribal deity to that of a universal God of Righteousness. In doing so they discovered the secret of personality, which the author claims to be individuality plus a sense of representativeness. What is meant by this may perhaps be better understood from one or two questions. "The person is the individual who is representative of his group" (p. 10). "Between these two poles of isolation and complete identification the tension that makes personality is strung" (p. 13). "Our personality grows as we realize our unity with the world of men and things in which we live" (p. 15).

This somewhat mystical conception the author uses to press home a series of suggested reforms in national life. For all its professed care of the rights of individuals, Democracy has secularized national life. It has enshrined in that life a sentimental materialism which really depersonalizes citizens by regarding them as elaborate mechanisms. Mr. Burgmann's charge is in essence the same as Ruskin's. Over the second lecture he might indeed have written the well-known dictum: "The final outcome and consummation of all wealth is in the producing as many as possible full-breathed, bright-eyed, and happy-hearted human creatures."

Turning to "Man and his Work", the author gives an estimate of the contribution of the sciences in order of increasing complexity. Mathematics treats man as a number; Physics as a machine; Biology as a hand; while Psychology goes on to study, not merely the living organism, but also the workings of the mind which moves it. But all these lead man only to the threshold of an explanation of himself. Nothing but the religious view of man suffices to explain him. For this reason Science must be dethroned from its empire over human imagination. The best of the physicists have already cast away materialism as a philosophy. And man wants more than material wealth. He is asking for a faith by which to live. Mr. Burgmann proposes to give it to him in the shape of the Christian Doctrine of Man, but requires in advance that he should refrain from asking for "certainties", which "are no more available in the realm of religion than they are in the realm of art or philosophy". There is no intellectual proof of the existence of God, nor of the truth of Christ's revelation of Him. Logic does not apply. We can only bid the inquirer to "Come and see". Of the result of this pragmatic test the author is not in doubt. Discipleship will lead the disciple beyond the teacher and up to God. The last lecture ends on a wise note which may be commended to all writers of apologetics. "The Christian way of life is . . . at bottom a faith in the ability of Jesus of Nazareth to make known to us the God of all."

A reviewer must have his little grumble. Mr. Burgmann is extremely interested in Freudian psychology and in dreams. He sees absolutism as a father type of government. At the end of a discussion of the evolution of self-government in these terms, he remarks:

> "In Russia . . . the rebellion of the son has been carried to tragic proportions because the original oppression of the father had been so fierce. It is interesting to see how closely the idea of God has been related to the idea of king and father. The more extreme Russian revolutionaries are fearful both of the idea of God and of the family. They unconsciously fear the return of the father and they have good reason to do so."

Is not this going beyond the limits of analogy? Can modern psychology show us a group person with a group mind, about which we can postulate the things we postulate about the mind of the individual? Can a nation be psycho-analysed in this fashion at all?

Here is a final reflection. In his lecture on "Man and His Work", Mr. Burgmann remarks, after castigating the leaders of the present order: "Today the Christian must give up apologizing for his faith. He must declare it, and live it, fully, faithfully, and fearlessly, in face of a muddled, perplexed and bewildered world."

But what faith? That is just it. Years ago Dr. Figgis complained that the modernists were "taking away the poor man's God". Mr. C. H. S. Matthews, quoting from his experiences with charcoal burners in Sussex, retorted that it was not the poor man's God whom the modernists were destroying, but rather "the God of the extremely intellectual theologians from St. Augustine and St. Thomas Aquinas down to Dr. Figgis himself".

And so it is with Mr. Burgmann's exhortation. What is the faith that Christians must declare and live fully in order to bring light to this befogged world? A faith such as that sketched in this little book would give some help indeed. But the kind of faith proclaimed by the majority of Christian churches, and taught by the majority of parsons, in terms of the Atonement buttressed by Eternal Hell, does not seem likely to get us much further out of the fog. One wishes that the official teachers of this faith would get and read Mr. Burgmann's book.

G. V. PORTUS.

THE MEASUREMENT OF MANUAL DEXTERITIES. Report by F. M. Earle, F. Gaw, and Other Members of the National Institute of Industrial Psychology, Aldwych House, London, W.C. 2. 1930. Price: 5s.

This investigation covers a number of simple manumotor tests of dexterity. The reasons for choosing the particular tests were that they involved either singly or in combination the following factors:

(*a*) Characteristic types of movements involving finger or wrist operations.
(*b*) Precision and speed.
(*c*) Perceptual judgments.

Fifteen tests are reported upon. They cover work in tapping with various fingers of the right or the hand if preferred, twisting with wrist movements, knotting operations, placing pegs in a board with various fingers, accuracy in aiming and spatial and tactual judgments.

The groups to which the tests were administered varied in size from two hundred to five hundred. The subjects ranged in age from eight to sixteen years, and were of both sexes. The results appear to confirm those of previous workers in discovering no general factor of motor ability. However, the average inter-correlations for all finger dexterity-tests were 0·36, for speed-tests 0·29, while tactual discrimination showed only the result of 0·17. Hence there are reasons for inferring a general "speed" factor.

The section disclosing the most promising results is the last and briefest. Two tests, *viz.*, the "nuts and bolts" test and "peg placing with different fingers", obviously appear to be of partial vocational significance. Their results correlate with their trade teachers' estimates of general proficiency but not manual dexterity, as follows:

No. of Test.	Fitter.	Smith.	Carpenter.	Electrician.
Test VII (Peg Placing)	—	0·38±0·11	0·34±0·11	0·27±0·11
Test V (Nuts and Bolts)	0·31±0·11	0·43±0·11	0·29±0·1	0·37±0·13

These are neither pure speed nor pure accuracy tests. Their chief emphasis would be upon the complex factors of co-ordination and motor control. Other investigators have previously emphasized the inefficiency of simple speed tests for testing vocational fitness in skilled work. The results here recorded appear to confirm that opinion.

As an investigation into the particular problems concerned this is the most careful and exhaustive to date. It marks a distinct achievement in this section of psychological tests.

A. H. MARTIN.

LE DÉVELOPPEMENT MENTAL ET L'INTELLIGENCE. By Henri Piéron. Paris. Félix Alcan. 1929. Pp. xii–95. Price: 10 frs.

This brochure contains a series of four lectures which M. Piéron was invited to give at Barcelona in December, 1926. The subjects of the respective lectures were: (1) Mental Development and Its Stages; (2) The Measurement of Levels of Development; (3) Development and Intelligence—Level and Mental Profile; (4) The Problems of the Evaluation of Intelligence—Necessity for an Analytical Evaluation.

Small though the book is (M. Piéron regards it as merely an outline), it is packed with good material. Moreover, it is admirable in sequence and delightfully clear in exposition. Indeed, it forms a complete compendium of the problems of mental measurement, of the discussions upon the nature of intelligence, of the distinction between measurement of mental development and of intelligence as such, of the question whether the mental hierarchy is constant and whether it maintains itself into adult age, of the importance of an analysis of the types of intelligence and the provision of a scheme of tests to provide a profile sketch of intelligence, of the necessity of such a profile for purposes of professional orientation which he regards as one of the most important tasks of modern civilization. Space does not allow one to give in any detail the substance of the able discussions which fill these pages, though one would keenly desire to do so. However, one may perhaps remark that the carefully graded treatment produces a cumulative effect which is striking, while the many brief but pertinent references to researches betray the well-informed master of his subject. One is gradually led from an appreciative evaluation of Binet's scale, through the Terman revision and a critical comparison with the Yerkes point scale, to group tests, the conception of a mental hierarchy and the inadequacy of the I.Q. when we wish to determine the level of adult mental age. To find the level of adult mental age, M. Piéron would reject evaluation by age and resort to the Yerkes point scale. He would raise the upper limit of mental measurement by this scale so that no individual could attain that limit, and would substitute for certain tests others more suitable for adults.

The definitions of intelligence advanced by Spearman, Burt, Ballard, Thurstone, Stern and Claparède are all given, and M. Piéron accepts Claparède's definition that intelligence is a capacity for solving new problems by thought. This capacity of intelligence can be considered either from the point of view of development or from that of the characteristic inequalities evinced by individuals in the course of development. He distinguishes between tests of development and tests of aptitude. The most characteristic tests of intelligence do not appear to satisfy the criterion for a test of development, but appear rather as tests of aptitude. A good development scale of tests would therefore not be a good intelligence scale and *vice versa*. Therefore a differentiation of tests and an analysis of mental functions became desirable. For certain subjects succeed in certain tests because they possess certain functions in a high degree, and fail in other tests because they do not possess the requisite functions in sufficient degree. These facts introduce the question of vocational guidance and the mental profile or psychographic record, whereupon the need of a psychological analysis of mental functions intrudes itself. If there is a unique common factor, general ability or general intelligence or " g.", it may probably be traced, M. Piéron thinks, to the level of development attained by the functional capacities of the higher cortical centres. However, he points out that the possibility of a certain combination of many factors is not excluded as the account to be given of intelligence. Indeed, he obviously favours this second view. For example, he says, the speed of a motor-car obviously depends upon a central factor, the motor. But it also depends upon many other factors, so that if you wish to classify cars as to speed that can only be done by tests of speed. So with intelligence: when the mind tries to solve a new problem it attacks that problem with all its resources, and we have to evaluate intelligence according to a functional capacity to overcome difficulties, without concerning ourselves about some abstract general ability, the consideration of which would merely lead us astray.

On the other hand, it is not sufficient to evaluate separately the level of each mental function and then to sum these partial levels to get a numerical level of intelligence. A certain harmonious equilibrium should mark the participation of the various mental functions in any intelligent activity, just as anatomy alone cannot suffice to give an account of the life of an organism in all its functional complexity. "To evaluate intelligence is to regard the life of an organism from a certain point of view, by placing it in the conditions suitable for revealing certain of its capacities," and in the intelligent act all the functions are involved though the importance of their respective rôles may be unequal. To evaluate intelligence as such it is necessary to examine how the individual acquits himself when put to the test of a new problem. One evaluates intelligence according to the proportion of problems correctly solved under definite and constant conditions. The varying factor of interest is a difficulty, as is also the school drill which provides the pupil of mediocre intelligence with the automatic capacity for getting a good result. This drill in formulæ puts a premium upon docility, and leads to excessive elevation of the mediocre child. This is especially true of scholastic tests, examinations and competitions. Hence, new forms of tests are required for which there has been no school drill. These new tests must avoid global representation, and allow the revelation of different types of intelligence. In this regard Thorndike analyses intelligence into three types from the point of view of "speed", "depth" and "extension". The mechanic needs the capacity of speed, the philosopher depth, while a Leonardo exhibits unusually notably the capacity of extension. This implies that an analysis of the nature of the possible problems is required. So far as this analysis has gone it can be said that the types of tests in the intelligent scales so far used far from correspond to the variety of actual problems. Still, there are tests to distinguish numerical intelligence, verbal intelligence, logical intelligence and practical intelligence. As subjects perform differently in these different types of tests, one must not be content to establish a global hierarchy of intelligence, but must sketch the characteristic silhouette of intelligence, trace its profile.

Finally, there is the analysis of intelligent function into understanding, invention and critical capacity.

It is according to the form and type of intelligence that the more gifted will be able to be directed more precisely by specialized education into the highly differentiated tasks presented by modern society.

H. TASMAN LOVELL.

PSYCHE AND MINERVA. What to Read in Psychology and Philosophy. By J. Alexander Gunn, M.A., B.Sc., Ph.D. Melbourne University Press. 1930. Price: 1s. 6d.

This is a select bibliography with an introduction. The introduction is divided into two parts. The first part is entitled "Psyche" and deals with Psychology; the second part is entitled "Minvera" and deals with Philosophy. It is astonishing how comprehensively and how interestingly both psychology and philosophy are treated in the brief introduction. The reader is actually provided with an adequate orientation in a few pages.

The bibliography, though "select", is yet very representative and well classified, and should admirably fulfil its author's intention to provide a guide for reading in Psychology and Philosophy.

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BULLETIN DE L'INSTITUT NATIONAL D'ORIENTATION PROFESSIONNELLE. Monthly Review published by the Institut National d'Orientation Professionnelle. Musée Pédagogique, 41, Rue Gay Lussac, Paris. Price: 25 fr. per annum.

THE MORPETH REVIEW: Edited by J. H. Burgmann, R. S. Lee, and A. P. Elkin. S. John's College Press, Morpeth. Published quarterly. Price: 7s. 6d. per annum.

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NOTES AND NEWS.

The Auckland Branch of the Australasian Association of Psychology and Philosophy opened its session on May 8, with a presidential address by Professor W. Anderson entitled "Professor Dewey's Ideals in Ethics and Economics". On June 12, the meeting took the form of a round table discussion on "Political Pluralism". On June 26, Mr. H. Becroft, M.A., gave a critical exposition of the "Gestalt Psychology". On July 10, Dr. Ranston, M.A., read a paper on "Job and the Problem of Physical Evil". On August 7, Mr. MacGregor, Lecturer on Zoology at the Auckland University College, who has recently returned from a scientific expedition to New Guinea, gave a lecture on "Primitive Life and Thought". The lecture was illustrated by lantern slides of exceptional interest. On September 4, Miss M. W. Crookes read a paper on "Psychical Phenomena and Idealism". On October 2, Mr. Shearer discussed the relations between Ethics and Industry in a paper entitled "Ethics and Economics". The session will conclude with a paper by Mr. Allen on "Relativity".

During 1931 the Society proposes, in view of the Hegel Centenary, to devote a number of its meetings to papers dealing with different aspects of Hegel's philosophy.

In New Zealand there has been published recently a report by the Parliamentary Committee appointed to consider our National System of Education. In this regard, the concern of the Society has been aroused by the comments and recommendations made by politicans upon questions of psychological and educational interest. On September 18, Professor Anderson, in a public lecture entitled "Educational Assumptions of the Atmore Report", pointed out the questionable nature of the theoretical presuppositions of the Report of the Education Committee, and drew attention to some of its more noteworthy inconsistencies. The Executive has taken up the question, and certain members of the Branch have undertaken to criticize the philosophical and psychological foundations of the Report. The President, Professor Anderson, will deal with the relation of the Report to the University; the Very Reverend H. K. Archdall with its relation to the Secondary Schools; Mr. Becroft with its relation to the Primary Schools. Professor Fitt will consider the question of Vocational Guidance; Miss E. M. Johnson will discuss the question of Subnormality; Dr. Anschutz will analyse the problem of Examinations; while Miss M. W. Crookes and Mr. D. MacGregor will be concerned with ideals in the teaching of Science, and the Agricultural Bias.

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The following papers have been read at the monthly meetings of the Melbourne University Philosophical Society during the past year: "A New Chapter of Practical Sociology", by Dr. J. C. Demarquette; "Child Psychology", by Mrs. Warren; "Education and Philosophy", by Professor L. J. Wrigley; "The Ethical Theories of Renouvier and Kant Compared", by Professor J. A. Gunn; "Dreams", by Rev. Professor Oxer; "New Ideas of Matter and Energy", by Mr. J. S. Rogers; "Symposium on Solipsism", by Honours Students; "Law and Logic", by Professor K. H. Bailey.

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The Sydney Local Branch has enjoyed a successful year from the point of view of membership. Papers were given by the President, Professor John Anderson, M.A., on "Ethics, Authoritarian or Scientific"; Dr. C. R. McRae, on "Laughter", an address published in this number; Messrs. A. C. Conlon and G. F. McIntosh, B.A., on the "Relation of Psychology to Philosophy"; C. A. Walsh, B.A., on "Literature and Morals"; F. Benning, B.A., on "The Psychology of Crime"; N. C. Porter, B.A., on "Æsthetics". Besides these, two public lectures were given with a view to raising funds for the Association. These were given by Professor H. T. Lovell, M.A., Ph.D., who spoke on the subject of "Dreams" to an audience of about five hundred people, and Mr. R. Simmat, M.A., who lectured on "Modern Advertising" to an audience composed mainly of members and business men. Both addresses resulted in the Association gaining many new subscribers, and the former also meant a gain to the Association of thirteen pounds five shillings.

Australasian Association of Psychology and Philosophy.

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